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Summary of Pacific Salmon Escapement Goals in Alaska with a Review of Escapements from 2001 to 2009

by

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and

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July 2010

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

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Weights and measures (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures): first three letters	Jan,...,Dec
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	use two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mid eye to fork	MEF
mid eye to tail fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	*e*
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	*E*
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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ABSTRACT

This report summarizes statewide Pacific salmon escapement goals in effect in 2009 and documents escapements for all species and stocks with goals from 2001 through 2009. Annual escapements are compared against escapement goals in place at the time to assess outcomes, with summaries by the Division of Commercial Fisheries regions. We list methods used to enumerate escapements and to develop current escapement goals (with brief descriptions) for each monitored stock.

Key words: escapement, escapement goals, Chinook salmon, sockeye salmon, coho salmon, pink salmon, chum salmon, Alaska Board of Fisheries, statewide, Alaska

INTRODUCTION

Scientifically defensible Pacific salmon escapement goals are a central tenet of fisheries management in Alaska. Escapement goals are founded in the sustained yield principle highlighted in the State Constitution (Article VIII, section 4) and in state statute (AS 16.05.020). Several policies in Alaska Administrative Code also provide guidance for establishing escapement goals including the policy for the management of sustainable salmon fisheries (5AAC 39.222), the policy for statewide salmon escapement goals (5 AAC 39.223) and the policy for the management of mixed stock fisheries (5 AAC 39.220). These policies provide detailed definitions of specific escapement goal types, outline the responsibilities of the Alaska Department of Fish and Game (department) and the Alaska Board of Fisheries (board) in establishing goals, and provide general direction for development and application of escapement goals in Alaska. Currently, there are 290 active salmon stock escapement goals throughout the state of Alaska (Figure 1).

It is the responsibility of the department to document, establish and review escapement goals, prepare scientific analyses in support of goals, notify the public when goals are established or modified, and notify the board of allocative implications associated with escapement goals. The foundation for this effort is regional or area escapement goal review teams assembled every three years to review goals, recommend changes, establish new goals or eliminate goals. The teams encompass broad expertise in biological characteristics of salmon stocks and technical approaches for establishing goals. Scientific staff from headquarters may assist regional teams and address issues of general importance for escapement goal development and application in Alaska. A detailed regional report of escapement goal recommendations is presented to the board and the public at tri-annual meetings for that region or area. Following the board meeting, recommended goals are presented to the directors of the divisions of Commercial Fisheries and Sport Fish for approval.

While development of regional escapement goals are exhaustively detailed in regional reports and supporting documents, this statewide summary report allows readers to examine the goals and escapements for salmon stocks in a single document. It provides an overview of salmon stocks for which goals exist, a numerical description of the goal, type of goal, year the current goal was first implemented and recent years' escapement data for each stock. In addition, summary statistics documenting performance in achieving goals is presented, including a statewide summary of stocks with yield or management concerns, as recommended by the department and established by the board. This report will be a useful resource for department staff, stakeholders, and the public. While many regional and area staff members have contributed to the assembly and review of the summary tables contained in this report, errors and omissions are the sole responsibility of the authors.

METHODS

We reviewed department escapement goal reports and supporting documents to catalog current escapement goals in each region for all five species of Pacific salmon, including information on stock name, type of goal, numerical description of the goal and the year it was implemented (i.e. the first season that the goal was used to manage escapements). Regional and area staff from the divisions of Commercial Fisheries and Sport Fish provided the most current escapement estimates from 2001 through 2009 for each stock with an established escapement goal. The escapement goals listed are those in effect during the 2009 spawning season.

Escapements from 2001 through 2009 were compared against escapement goals in place at the time of enumeration to assess outcomes in achieving goals. Escapements for a particular stock were classed as "Under" if escapement for a given year was less than the lower bound of the escapement goal. If escapement fell within the escapement goal range or was greater than a lower-bound goal, we considered the goal "Met". Where escapement exceeded the upper bound of an escapement goal range, it was classed as "Over". Where escapement goals or enumeration methods changed between 2001 and 2009 for a stock, we assessed outcomes by comparing escapement estimates with the goal and methods in place at the time of the fishery. Information on previous escapement goals and methods came from a detailed review of regional escapement goal reports, supporting documents, and conversations with regional and area biologists.

METHODS OF ESCAPEMENT GOAL DEVELOPMENT

A variety of methods are used to develop escapement goals in Alaska and brief descriptions of each are summarized below. The most commonly used methods are listed first, followed by the less common methods.

Percentile Method: A method for establishing sustainable escapement goals (SEG) developed by Bue and Hasbrouck (Unpublished)[1]. Contrast of the observed annual escapements (largest escapement divided by smallest escapement) and exploitation rate of the stock are used to select percentiles of observed escapements for estimating lower and upper-bounds of the escapement goal.

Spawner-Recruit Analysis (SRA): Analysis of the relationship between escapement (number of spawners) and subsequent production of recruits (i.e. adults) in the next generation. There are several SRA models, but the Ricker production model Ricker 1954 is almost exclusively used for salmon populations in Alaska.

Risk Analysis: Risks of management error, unneeded management action or mistaken inaction, in future years are estimated based on a precautionary reference point established using past observations of escapement Bernard et al. 2009. This method is primarily used to guide establishment of a lower-bound SEG for non-targeted stocks of salmon.

Yield Analysis: Graphical or tabular examination of yields produced from observed escapement indices from which the escapement range with the greatest yields is identified Hilborn and Walters 1992.

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[1] Bue, B. G., and J. J. Hasbrouck. *Unpublished*. Escapement goal review of salmon stocks of Upper Cook Inlet. Alaska Department of Fish and Game, Report to the Alaska Board of Fisheries, November 2001 (and February 2002), Anchorage.

Theoretical Spawner-Recruit Analysis (Theoretical SRA): Used in situations where there are few or no stock specific harvest estimates and/or age data. Information from nearby stocks, or generalizations about the species, are used in a spawner-recruit production model to estimate the number of spawners needed to achieve maximum sustained yield (MSY) e.g., Clark 2005.

Empirical Observation: Goal development methods classified as "Empirical Observation" generally are *ad hoc* methods for stocks with limited or sparse data. Goals are based on observed escapements over time and may be calculated as the average escapement or the value of a low escapement for which there is evidence that the stock is able to recover e.g., Norton Sound pink salmon escapement goals, ADF&G 2004.

Zooplankton Model: This model estimates the number of sockeye salmon smolts of a threshold or optimal size that a lake can support based upon measures of zooplankton biomass and surface area of the lake Koenings and Kyle 1997. Adult production is then estimated from predicted smolt production by applying marine survival rates for a range of smolt sizes.

Spawning Habitat Model: Estimates of spawning capacity or number of spawners that produce MSY are based on relationship with watershed area, available spawning habitat in a drainage, or stream length. Spawning habitat models have been developed for sockeye salmon Burgner et al. 1969, coho salmon *Oncorhynchus kisutch* Bradford et al. 1999; Bradford et al. 1997 and Chinook salmon *O. tshawytscha* Parken et al. 2004.

Euphotic Volume (EV) Model: Measurement of the volume of a lake where enough light penetrates to support primary production (i.e. euphotic volume) is used to estimate sockeye salmon smolt biomass Koenings and Burkett 1987 from which adult escapement is then estimated using marine survival rates.

Lake Surface Area: Similar to spawning habitat models, the relationship between the lake surface area and escapement are used to estimate adult sockeye salmon production Honnold et al. 1996; Nelson et al. 2006.

Conditional Sustained Yield Analysis: Observed escapement indices and harvest are used to estimate if, on average, surplus production (yield) results from a particular goal range Nelson et al. 2005. Estimated expected yields are conditioned on extreme values of measurement error in the escapement indices.

Brood Interaction Simulation Model: This model simulates production using a spawner-recruit relationship that modifies the simulated production for the year of return using an age-structured sub-model, and estimates resulting catches and escapements under user-specified harvest strategies Carlson et al. 1999. This is a hybrid of a theoretical SRA and yield analysis that has only been used to develop the escapement goal for Kenai River sockeye salmon *O. nerka*.

RESULTS AND DISCUSSION

Summaries of estimated escapements and escapement goals for each monitored salmon stock from 2001 to 2009 are presented by region and species in Tables 1-4. While most information was available through regional escapement goal reports, 2009 data were often obtained directly through area and regional biologists. Data for 2009 are often preliminary estimates because complete data regarding subsistence and sport harvests are often not available immediately following the season.

A summary of escapement goal types for all species by region indicate that the majority of goals in Central, Westward, and AYK regions are SEGs, including lower-bound SEGs, with biological escapement goals (BEG) making up a smaller proportion of goals (Figure 1). The reverse is true for Southeast region, where most goals are BEGs. Optimal escapement goals (OEG), management targets, and goals based upon international agreements collectively represent a small proportion of escapement goals in Alaska.

Use of different escapement goal types for each salmon species is summarized by Division of Commercial Fisheries regions (Figures 2-5). Among the four regions, there are some distinct differences in the distribution of goal types by salmon species. In Southeast Region, all Chinook and pink salmon *O. gorbuscha* goals, as well as a majority of goals for coho (>60%) and sockeye (>40%) are BEGs (Figure 2). This is sharply contrasted with Central Region, where the majority of all goals are SEGs, with three Chinook and four sockeye stocks representing the only BEGs (Figure 3). AYK Region has the only BEGs for chum salmon in the state, with additional BEGs for three Chinook and one sockeye salmon stock (Figure 4). Like Southeast, all Chinook salmon stocks in Westward Region are BEGs, but a much smaller proportion of coho and sockeye salmon goals are BEGs (Figure 5). These are broad generalizations immediately apparent from our summary. There are many reasons why goal types would be different between regions including fishery structure, stock assessment capacity and technical approaches. A review of these observations by the inter-divisional escapement goal team will provide important insight about regional differences and how understanding these differences may lead to greater statewide consistency of approach in developing escapement goals.

Summary comparisons of actual estimated escapements with escapement goals in place at the time are shown in Tables 5 to 8, highlighting whether the goal was exceeded, met or not met. Numerous footnotes contain important information about changes in stock assessment methods or goal ranges during that time, and are essential for a thorough understanding of the escapement estimates and evaluations of outcomes against goals. Summaries of outcomes in achieving goals are presented by species (Tables 9-12) and region (Tables 13-16; Figures 6-9). Between 2001 and 2006, it was typical to observe greater than 80% success in achieving escapement goals for all species in all regions except AYK (Figures 6-9; Tables 9-12). In recent years, the proportion of escapements falling below the lower bound of goals has increased in Southeast, Central and Westward regions (Figures 6-9; Tables 9-12). Because meeting escapement goals is fundamental to department efforts to manage for sustainable salmon stock productivity, it is important to document outcomes for meeting these goals. Where escapements chronically (4-5 years) fail to meet expectations for harvestable yield or spawning escapements, the department may recommend, and the board may adopt a stock of concern designation for those under-performing salmon stocks. The sustainable salmon fisheries policy (5 AAC 39.222) provides specific definitions for stocks of concern. Yield concerns arise from a chronic inability to maintain expected yields or harvestable surpluses above escapement needs. Management concerns are precipitated by a chronic failure to maintain escapements within the bounds, or above the lower bound of the established goal. A conservation concern may arise from a failure to maintain escapements above a sustained escapement threshold (SET). Methods to develop stock-specific SETs, as defined in the sustainable salmon fisheries policy, are not well developed, and no SETs or stocks of conservation concern exist in Alaska. There are currently five stocks of yield concern and one stock of management concern in the state (Table 17).

The array of methods used to enumerate salmon for each of the stocks with escapement goals, as well as methods used to assist department staff in developing the escapement goal for a given stock are summarized by region in Tables 18-21.

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TABLES AND FIGURES

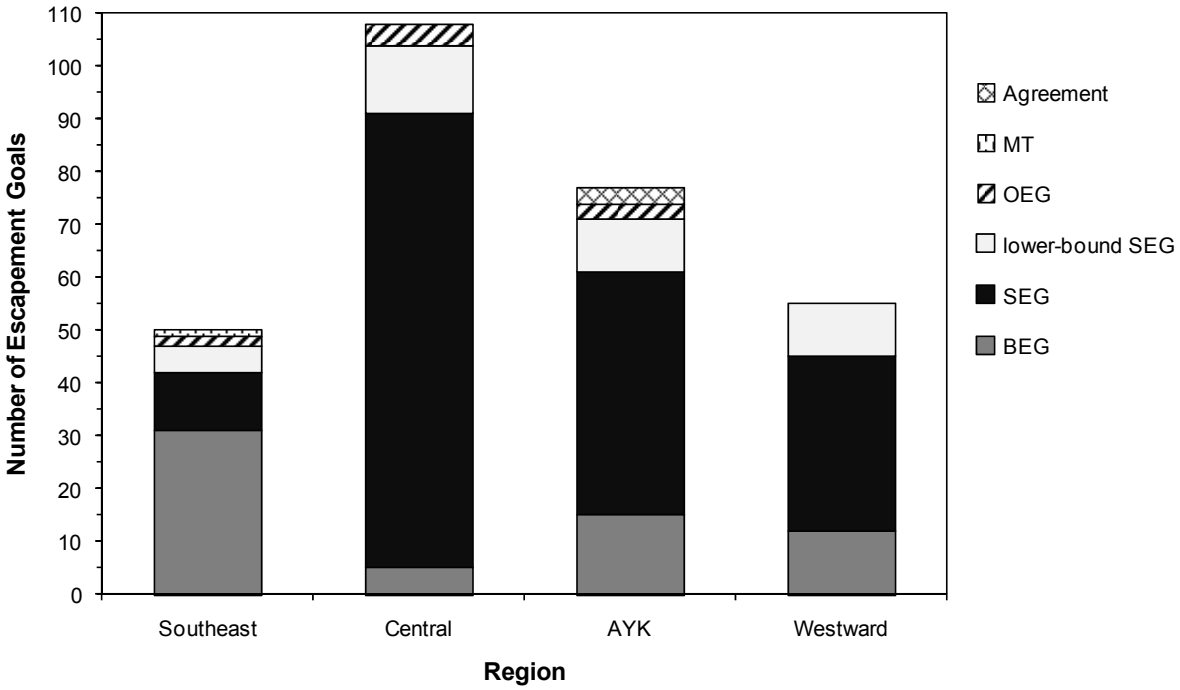

Figure 1.–Statewide summary of the 290 escapement goals in effect during the 2009 spawning season for the four Division of Commercial Fisheries regions. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), MT is management target and agreement goals are established through international treaties.

Table 1.–Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2001 to 2009.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON													
Blossom River	250	500	BEG	1997	204	224	203	333	445	339	135	257	123
Keta River	250	500	BEG	1997	343	411	322	376	497	747	311	363	172
Unuk River	1,800	3,800	BEG	2009	10,541	6,988	5,546	3,963	4,742	5,645	5,718[a]	3,109[a]	3,103[a]
Chickamin River	450	900	BEG	1997	1,010	1,013	964	798	924	1,330	893	1,086	611
Andrew Creek	650	1,500	BEG	1998	2,055	1,708	1,160	2,991	1,979	2,124	1,736	981	628
Stikine River	14,000	28,000	BEG	2000	63,523	50,875	46,824	48,900	40,501	24,400	16,442	21,900	12,596
King Salmon River	120	240	BEG	1997	149	155	119	135	143	150	181	120	109
Taku River	19,000	36,000	BEG	2009	46,644	55,044	36,435	75,032	38,725	42,296	14,854	27,383	20,762[a]
Chilkat River	1,750	3,500	BEG	2003	4,517	4,051	5,657	3,422	3,366	3,039	1,442	3,233[a]	4,463[a]
Klukshu (Alsek) River	1,100	2,300	BEG	1998	1,738	2,141	1,661	2,455	1,034	568	674	465	1,535
Situk River	450	1,050	BEG	2003	562	1,000	2,163	698	595	695	677	413	902[a]
CHUM SALMON													
Southern Southeast Summer	68,000		lower-bound SEG	2009	125,000	55,000	66,000	74,000	66,000	76,000	132,000	13,000	41,000
Northern Southeast Inside Summer	149,000		lower-bound SEG	2009	229,000	397,000	210,000	242,000	185,000	282,000	149,000	99,000	107,000
Northern Southeast Outside Summer	19,000		lower-bound SEG	2009	58,000	19,000	30,000	86,000	77,000	57,000	34,000	46,000	15,000
Cholmondeley Sound Fall	30,000	48,000	SEG	2009	45,000	39,000	75,000	60,000	15,000	54,000	18,000	49,500	39,000
Port Camden Fall	2,000	7,000	SEG	2009	NA	450	676	3,300	2,110	2,420	505	1,400	1,711
Security Bay Fall	5,000	15,000	SEG	2009	3,500	6,000	8,700	13,100	2,750	15,000	5,400	11,700	5,100
Excursion River Fall	4,000	18,000	SEG	2009	17,750	4,680	6,300	5,200	1,100	2,203	6,000	8,000	1,400
Chilkat River Fall	75,000	170,000	SEG	2009	312,000	206,000	166,000	310,000	202,000	704,000	331,000	451,000	337,000
COHO SALMON													
Hugh Smith Lake	500	1,600	BEG	2009	1,580	3,291	1,510	840	1,732	891	1,224	1,741	2,282
Taku River[b]	35,000		MT	1995	104,394	219,360	183,038	132,405	91,830	140,028	49,632	95,360	104,320
Auke Creek	200	500	BEG	1994	842	1,112	585	416	450	582	352	600	360
Montana Creek	400	1,200	SEG	2006	1,119	2,448	808	364	351	1,110	324	405	698
Peterson Creek	100	250	SEG	2006	106	195	203	284	139	439	226	660	123
Ketchikan Survey Index	4,250	8,500	BEG	2006	11,475	12,223	11,859	9,904	14,840	6,912	4,488	16,680	8,226
Sitka Survey Index	400	800	BEG	2006	1,515	1,868	1,101	1,124	1,668	2,647	1,066	1,117	1,156
Ford Arm Lake	1,300	2,100	BEG	1994	2,178	7,109	6,789	3,539	4,257	4,737	2,567	5,173	2,164
Berners River	4,000	9,200	BEG	1994	19,290	27,700	10,110	14,450	5,220	5,470	3,915	6,870	4,230
Chilkat River	30,000	70,000	BEG	2006	108,698	205,429	134,340	67,465	38,589	80,683	25,493	57,376	47,548
Lost River	2,200		lower-bound SEG	2009	3,190	8,093	6,394	5,047	1,241	3,500	2,542	NA	3,581

-continued-

Table 1.–Page 2 of 2.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Situk River	3,300	9,800	BEG	1994	5,030	40,000	6,009	10,284	2,514	8,533	5,763	NA	5,814
Tsiu/Tsivat Rivers	10,000	29,000	BEG	1994	17,000	31,000	35,850	NA	16,600	14,500	14,000	25,200	28,000
PINK SALMON													
Southern Southeast	3,000,000	8,000,000	BEG	2009	10,990,000	8,850,000	9,780,000	8,260,000	9,400,000	4,330,000	10,590,000	6,290,000	7,200,000
Northern Southeast Inside	2,500,000	6,000,000	BEG	2009	5,270,000	5,470,000	6,680,000	5,210,000	6,680,000	3,960,000	4,740,000	1,470,000	3,650,000
Northern Southeast Outside	750,000	2,500,000	BEG	2009	2,370,000	2,300,000	3,510,000	2,190,000	3,840,000	1,960,000	2,310,000	1,730,000	1,820,000
Situk River (even-year)	42,000	105,000	BEG	1995		98,790		145,914		115,100		140,000	
Situk River (odd-year)	54,000	200,000	BEG	1995	121,267		375,333		279,648		229,000		62,300
SOCKEYE SALMON													
Hugh Smith Lake	8,000	18,000	OEG[c]	2003	3,825	6,166	19,568	19,734	23,872	42,112	33,743	3,588	9,483
McDonald Lake	55,000	120,000	SEG	2009	42,768	25,776	110,633	28,759	61,043	31,357	29,086	20,700	51,000
Mainstem Stikine River	20,000	40,000	SEG	1987	40,855	31,387	57,972	36,748	34,788	27,603	27,493	14,500	23,000
Tahltan Lake	18,000	30,000	BEG	1993	14,676	17,340	53,533	62,952	43,046	53,455	20,874	10,646	30,700
Speel Lake	4,000	13,000	BEG	2003	12,735	5,016	7,014	7,813	7,538	4,165	3,099	1,750	3,700
Taku River	71,000	80,000	SEG	1986	144,286	103,343	160,366	106,688	120,053	146,151	81,800	70,442	71,200
Redoubt Lake	7,000	25,000	OEG	2003	3,665	23,943	69,893	77,263	65,653	103,953	66,938	10,146	12,851
	10,000	25,000	BEG	2003									
Chilkat Lake	70,000	150,000	BEG	2009	131,687	134,424	113,000	119,000	84,000	73,000	68,000	71,700	153,000
Chilkoot Lake	38,000	86,000	SEG	2009	76,283	58,361	74,515	75,634	51,254	96,254	72,561	32,957	33,537
East Alsek-Doame River	13,000	26,000	BEG	2003	18,545	14,200	36,400	33,300	50,000	29,000	40,100	8,000	12,000
Klukshu River	7,500	15,000	BEG	2000	9,248	23,587	32,120	13,721	3,167	12,890	8,479	2,731	5,731
Lost River	1,000		lower-bound SEG	2009	1,440	1,800	3,000	1,100	1,500	1,018	180	146	NA
Situk River	30,000	70,000	BEG	2003	57,692	65,383	89,700	42,500	66,500	87,080	61,799	22,434	83,959

Note: NA = data not available

[a] Preliminary data.

[b] For the Taku River coho salmon, the management intent of the U.S. is to ensure a minimum above border run (i.e. in river run) of 38,000 fish as detailed in the Pacific Salmon Treaty. The management threshold for escapement is the inriver run minus the allowed Canadian inriver harvest of 3,000 at runs of less than 50,000.

[c] Hugh Smith Lake OEG includes wild and hatchery fish.

Table 2.–Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2001 to 2009.

System	2009 Goal Range		Type	Year Implemented	Escapement								
	Lower	Upper			2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON													
Bristol Bay													
Nushagak River	40,000	80,000	SEG	2007	84,665	81,061	72,420	107,683	163,506	117,364	53,344	88,758	73,295
Togiak River	9,300		lower-bound SEG	2007	13,110	9,515	NS	NS	NS	NS	NS	NS	NS
Naknek River	5,000		lower-bound SEG	2007	6,340	7,503	6,081	12,878	NS	NS	5,498	6,559	3,305[a]
Alagnak River	2,700		lower-bound SEG	2007	5,458	3,675	8,209	6,755	5,084	4,278	3,455	1,825	1,957
Egegik River	450		lower-bound SEG	2007	389	646	790	579	335	196	458	162	350[b]
Upper Cook Inlet													
Alexander Creek	2,100	6,000	SEG	2002	2,282	1,936	2,012	2,215	2,140	885	480	150	275
Campbell Creek	50	700	SEG	2008	717	744	747	964	1,097	1,052		439	554
Chuitna River	1,200	2,900	SEG	2002	1,501	1,394	2,339	2,938	1,307	1,911	1,180	586	1,040
Chulitna River	1,800	5,100	SEG	2002	2,353	9,002	NS	2,162	2,838	2,862	5,166	2,514	2,093
Clear (Chunilna) Creek	950	3,400	SEG	2002	2,096	3,496	NS	3,417	1,924	1,520	3,310	1,795	1,205
Crooked Creek	650	1,700	SEG	2002	1,381	958	2,554	2,196	1,903	1,516	964	881	619
Deshka River	13,000	28,000	BEG	2002	27,966	28,535	39,257	57,934	37,725	30,864	18,714	7,533	11,960
Goose Creek	250	650	SEG	2002	NS	565	175	417	468	306	105	117	65
Kenai River - Early Run	5,300	9,000	OEG	2005	14,073	6,185	10,097	11,855	16,387	18,428	12,500	11,743[c]	9,800[c]
	4,000	9,000	BEG	2005									
Kenai River - Late Run	17,800	35,700	BEG	1999	17,947	30,464	23,736	40,198	26,046	24,423	32,683	23,413[c]	18,000[c]
Lake Creek	2,500	7,100	SEG	2002	4,661	4,852	8,153	7,598	6,345	5,300	4,081	2,004	1,394
Lewis River	250	800	SEG	2002	502	439	878	1,000	441	341	0[d]	120	111
Little Susitna River	900	1,800	SEG	2002	1,238	1,660	1,114	1,694	2,095	1,855	1,731	1,297	1,028
Little Willow Creek	450	1,800	SEG	2002	2,084	1,680	879	2,227	1,784	816	1,103	NC	776
Montana Creek	1,100	3,100	SEG	2002	1,930	2,357	2,576	2,117	2,600	1,850	1,936	1,357	1,460
Peters Creek	1,000	2,600	SEG	2002	4,226	2,959	3,998	3,757	1,508	1,114	1,225	NC	1,283
Prairie Creek	3,100	9,200	SEG	2002	5,191	7,914	4,095	5,570	3,862	3,570	5,036	3,039	3,500
Sheep Creek	600	1,200	SEG	2002	NS	854	NS	285	760	580	400	NC	500
Talachulitna River	2,200	5,000	SEG	2002	3,309	7,824	9,573	8,352	4,406	6,152	3,871	2,964	2,608
Theodore River	500	1,700	SEG	2002	1,237	934	1,059	491	478	958	486	345	352
Willow Creek	1,600	2,800	SEG	2002	3,132	2,533	3,855	2,840	2,411	2,193	1,373	1,255	1,133
Lower Cook Inlet													
Anchor River	5,000		lower-bound SEG	2008	NA	NA	9,238	12,016	11,156	8,945	9,622	5,806	3,455
Deep Creek	350	800	SEG	2002	551	696	1,008	1,075	1,076	507	553	205	483
Ninilchik River	550	1,300	SEG	2008	897	897	517	679	1,259	1,013	543	586	528

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Table 2.–Page 2 of 5.

System	2009 Goal Range Lower	2009 Goal Range Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Prince William Sound													
Copper River	24,000		lower-bound SEG	2003	28,208	21,502	34,034	30,628	21,607	58,489	34,634	32,413	NA[e]
CHUM SALMON													
Bristol Bay													
Nushagak River	190,000		lower-bound SEG	2007	564,724	419,964	295,413	283,811	456,025	661,002	161,483	326,300	438,481
Upper Cook Inlet													
Clearwater Creek	3,800	8,400	SEG	2002	14,570	8,864	7,200	3,900	NA	NA	NA	4,530	8,300
Lower Cook Inlet													
Port Graham River	1,450	4,800	SEG	2002	6,037	5,253	2,925	1,177	743	2,231	1,882	1,802	1,029
Dogfish Lagoon	3,350	9,150	SEG	2002	6,068	10,062	13,287	3,617	2,746	5,394	4,919	6,200	4,380
Rocky River	1,200	5,400	SEG	2002	2,990	5,655	5,549	17,159	6,060	11,200	1,600	3,763	2,500
Port Dick Creek	1,900	4,450	SEG	2002	1,801	12,321	5,595	8,620	4,848	2,786	2,753	11,774	5,592
Island Creek	6,400	15,600	SEG	2002	6,270	15,251	16,274	15,135	20,666	5,615	3,092	12,935	9,295
Big Kamishak River	9,350	24,000	SEG	2002	36,341	17,350	16,357	57,897	25,717	58,173	14,787	4,495	15,026
Little Kamishak River	6,550	23,800	SEG	2002	27,184	16,400	22,194	45,342	12,066	42,929	15,569	21,265	4,213
McNeil River	24,000	48,000	SEG	2008	16,856	17,520	29,306	14,613	22,496	17,403	21,629	10,617	25,024
Bruin River	6,000	10,250	SEG	2002	21,782	9,852	13,080	15,886	21,208	7,000	3,055	17,535	10,071
Ursus Cove	6,050	9,850	SEG	2002	37,699	17,144	30,410	15,988	12,176	15,663	20,897	6,502	12,946
Cottonwood Creek	5,750	12,000	SEG	2002	15,868	42,194	72,764	16,277	17,914	13,243	12,522	11,561	19,405
Iniskin Bay	7,850	13,700	SEG	2002	13,754	28,486	18,709	22,044	16,461	15,640	5,340	20,042	30,821
Prince William Sound [f]													
Eastern District	50,000		lower-bound SEG	2006	198,683	94,046	198,921	108,833	113,135	109,403	123,814	74,740	55,219
Northern District	20,000		lower-bound SEG	2006	75,473	30,531	44,272	42,456	30,657	52,039	49,669	38,791	37,358
Coghill District	8,000		lower-bound SEG	2006	13,388	7,430	19,729	9,685	11,979	15,900	14,052	39,660	36,724
Northwestern District	5,000		lower-bound SEG	2006	6,373	16,194	12,736	10,371	12,696	25,860	10,778	28,051	34,290
Southeastern District	8,000		lower-bound SEG	2006	37,526	104,906	116,131	42,344	25,547	26,739	60,464	21,614	16,453
COHO SALMON													
Bristol Bay													
There are no coho salmon stocks with escapement goals in Bristol Bay													
Upper Cook Inlet													
Jim Creek	450	700	SEG	2002	1,019	2,473	1,421	4,652	1,464	2,389	725	1,890	1,331
Little Susitna River	10,100	17,700	SEG	2002	30,587	47,938	10,877	40,199	16,839	NA	17,573	18,485	9,523

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Table 2.–Page 3 of 5.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Lower Cook Inlet													
There are no coho salmon stocks with escapement goals in Lower Cook Inlet													
Prince William Sound													
Copper River Delta	32,000	67,000	SEG	2003	41,096	89,815	72,180	99,980	101,082	89,270	53,820	76,892	41,294
Bering River	13,000	33,000	SEG	2003	30,007	34,200	32,475	30,185	44,542	33,192	33,062	28,932	22,141
PINK SALMON													
Bristol Bay													
There are no pink salmon stocks with escapement goals in Bristol Bay													
Upper Cook Inlet													
There are no pink salmon stocks with escapement goals in Upper Cook Inlet													
Lower Cook Inlet													
Humpy Creek	21,650	85,550	SEG	2002	30,463	37,051	90,853	28,945	93,756	48,368	53,989	90,870	5,207
China Poot Creek	2,900	8,200	SEG	2002	6,639	6,543	6,694	3,335	9,223	7,242	6,235	5,086	1,120
Tutka Creek	6,500	17,000	SEG	2002	4,451	15,884	30,866	17,846	133,600	25,824	5,664	14,144	3,770
Barabara Creek	1,900	8,950	SEG	2002	2,287	3,241	5,062	5,395	14,440	3,554	25,168	16,557	2,583
Seldovia Creek	19,050	38,950	SEG	2002	12,259	26,938	35,135	56,763	98,602	70,045	69,405	53,484	14,619
Port Graham River	7,700	19,850	SEG	2002	10,260	58,527	14,916	44,010	69,095	31,173	25,595	24,720	13,996
Port Chatham	7,800	21,000	SEG	2002	17,921	18,078	34,979	26,375	44,389	24,210	14,451	16,354	25,291
Windy Creek Right	3,350	10,950	SEG	2002	10,300	14,401	23,341	11,974	22,174	17,146	32,297	12,491	15,012
Windy Creek Left	3,650	29,950	SEG	2002	61,813	28,946	82,814	23,286	72,031	65,155	18,339	64,068	57,263
Rocky River	9,350	54,250	SEG	2002	72,951	112,527	287,443	53,760	198,671	67,840	189,992	90,876	173,583
Port Dick Creek	18,550	58,300	SEG	2002	44,692	108,072	107,575	13,323	122,236	51,500	44,170	34,228	41,681
Island Creek	7,200	28,300	SEG	2002	81,764	44,105	118,637	33,573	26,404	107,683	87,235	49,719	44,527
S. Nuka Island Creek	2,700	14,250	SEG	2002	20,654	14,811	41,366	6,432	11,199	5,100	6,645	12,300	19,934
Desire Lake Creek	1,900	20,200	SEG	2002	67,480	78,410	34,766	24,258	45,980	74,774	11,820	9,546	73,926
Bear & Salmon Creeks	5,000	23,500	SEG	2005	3,025	2,689	4,435	1,236	34,452	9,033	NA	NA	NA
Thumb Cove	2,350	8,850	SEG	2002	3,121	3,694	5,050	4,250	8,668	5,205	NA	NA	NA
Humpy Cove	900	3,200	SEG	2002	330	1,832	2,563	990	14,586	1,905	NA	NA	NA
Tonsina Creek	500	5,850	SEG	2002	2,780	6,949	5,180	3,450	9,922	6,453	NA	NA	NA
Bruin River	18,650	155,750	SEG	2002	18,522	1,598,454	138,674	66,494	98,346	515,114	350,420	150,717	1,067,351
Sunday Creek	4,850	28,850	SEG	2002	26,231	81,949	346,657	31,497	116,170	70,037	394,797	20,434	106,296
Brown's Peak Creek	2,450	18,800	SEG	2002	19,166	27,480	285,049	18,100	60,983	35,703	249,383	17,400	63,605

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Table 2.–Page 4 of 5.

System	2009 Goal Range Lower	2009 Goal Range Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Prince William Sound													
All Districts Combined (even year)	1,250,000	2,750,000	SEG	2003		943,177		1,996,223		1,187,595		862,419	
All Districts Combined (odd year)[g]	1,250,000	2,750,000	SEG	2003	2,000,386		2,857,289		4,669,168		1,509,133		1,828,801
SOCKEYE SALMON													
Bristol Bay													
Kvichak River (off-peak)[h]	2,000,000	10,000,000	SEG	1997	1,095,000	704,000	1,687,000	5,500,000	2,320,000	3,068,000	2,810,000	2,758,000	2,266,000
Alagnak River	320,000		lower-bound SEG	2007	721,000	767,000	3,676,000	5,397,000	4,219,000	1,774,000	2,466,000	2,181,000	971,000
Naknek River	800,000	1,400,000	SEG[i]	1984	1,830,000	1,264,000	1,831,000	1,939,000	2,745,000	1,953,000	2,945,000	2,473,000	1,169,000
Egegik River	800,000	1,400,000	SEG	1995	969,000	1,036,000	1,152,000	1,290,000	1,622,000	1,465,000	1,433,000	1,260,000	1,146,000
Ugashik River	500,000	1,200,000	SEG	1995	866,000	906,000	790,000	815,000	800,000	1,003,000	2,599,000	596,000	1,364,000
Wood River	700,000	1,500,000	SEG	2000	1,459,000	1,284,000	1,460,000	1,543,000	1,497,000	4,008,000	1,528,000	1,725,000	1,319,000
Igushik River	150,000	300,000	SEG	2000	410,000	123,000	194,000	110,000	366,000	305,000	415,000	1,055,000	514,000
Nushagak River	237,000	760,000	OEG	1997	811,000	316,000	581,000	492,000	1,050,000	548,000	518,000	493,000	484,000
	340,000	760,000	SEG	1997									
Togiak River	120,000	270,000	BEG	2007	303,000	179,000	232,000	136,000	156,000	312,000	270,000	206,000	314,000
Upper Cook Inlet													
Crescent River	30,000	70,000	BEG	2005	78,081	62,833	122,457	103,000	125,000	92,000	79,406	62,029	NC
Fish Creek (Knik)	20,000	70,000	SEG	2002	43,486	90,483	91,952	20,000	12,000	32,000	27,948	19,339	83,480
Kasilof River	150,000	300,000	OEG	2002	297,000	215,000	347,000	575,000	346,000	366,000	336,886	300,000	296,000[e]
	150,000	250,000	BEG	2002									
Kenai River[j]	500,000	1,000,000	OEG	1999	481,932	744,884	927,632	1,131,210	1,121,634	1,327,054	602,186	407,138	594,000[e]
	500,000	800,000	SEG	2005									
Packers Creek	15,000	30,000	SEG	2008	NS	NS	NS	NS	22,000	NS	46,637	25,247	16,473
Russian River - Early Run	14,000	37,000	SEG	2002	78,255	85,943	23,650	56,582	52,903	80,524	27,298	30,989	52,178
Russian River - Late Run	30,000	110,000	SEG	2005	74,964	62,115	157,469	110,244	59,473	89,160	53,068	46,638	80,088
Yentna River[k]	90,000	160,000	SEG	2002	83,532	78,591	180,813	71,281	36,921	92,045	79,901	90,180	
Chelatna Lake	20,000	65,000	SEG	2009						18,433	41,290	73,469	17,865
Judd Lake	25,000	55,000	SEG	2009						40,633	58,134	54,304	43,153
Larson Lake	15,000	50,000	SEG	2009					9,751	57,411	47,736	35,040	41,929

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Table 2.–Page 5 of 5.

System	2009 Goal Range Lower	2009 Goal Range Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Lower Cook Inlet													
English Bay	6,000	13,500	SEG	2002	10,508	15,277	19,422	15,310	8,188	15,454	16,487	11,996	18,176
Delight Lake	5,950	12,550	SEG	2002	10,110	19,555	7,538	7,262	15,200	10,929	43,963	23,933	12,700
Desire Lake	8,800	15,200	SEG	2002	5,470	16,000	8,400	10,700	4,820	18,600	10,000	10,700	16,000
Bear Lake	700	8,300	SEG	2002	8,606	8,441	9,498	8,061	10,285	8,338	8,421	9,000	9,977
Aialik Lake	3,700	8,000	SEG	2002	5,100	6,100	5,370	10,100	5,250	4,760	5,370	4,200	3,100
Mikfik Lake	6,300	12,150	SEG	2002	5,350	16,650	12,830	14,020	5,970	17,700	11,190	5,560	15,130
Chenik Lake	1,880	9,300	SEG	2002	250	4,650	13,825	17,006	14,507	13,868	18,288	11,284	15,200
Amakdedori Creek	1,250	2,600	SEG	2002	2,690	3,200	11,800	7,200	1,710	300	3,830	3,200	2,160
Prince William Sound													
Upper Copper River	300,000	500,000	SEG	2003	493,736	572,610	461,050	438,482	541,247	605,874	638,029	496,451	NA[l]
Copper River Delta	55,000	130,000	SEG	2003	71,065	75,735	73,150	69,385	58,406	98,896	88,285	67,950	69,292
Bering River	20,000	35,000	SEG	2003	8,423	24,715	32,840	25,135	30,890	14,671	21,471	18,396	17,022
Coghill Lake	20,000	40,000	SEG	2006	38,558	28,323	75,427	30,569	30,313	24,157	70,001	29,298	19,293[m]
Eshamy Lake	13,000	28,000	BEG	2009	55,187	40,478	39,845	13,443	23,523	41,823	16,646	18,495	24,025

Note: NA = data not available; NC = no count; NS = no survey.

[a] In 2009, aerial surveys were only flown on Big Creek (2,834 Chinook salmon) and King Salmon River (471 Chinook salmon). Mainstem Naknek River and Paul's Creek were not surveyed in 2009.

[b] Aerial surveys were conducted in the Egegik and King Salmon River systems on August 5, 2009 to provide escapement indices for Chinook and chum salmon. Resulting counts were 350 Chinook, and 277 chum salmon. Water conditions were poor; high and turbid conditions prevented observation on most of the surveyed systems. Chinook escapement indices were well below average in streams surveyed, but should be considered minimum counts due to the poor water conditions. Based on carcass distribution and observed presence, the survey was likely conducted after peak spawning.

[c] Preliminary escapement estimates.

[d] Lewis River diverged into swamp 1/2 mi. below bridge. No water in channel.

[e] The 2009 Copper River Chinook salmon spawning escapement estimate is not available yet. The estimate is generated from a mark-recapture project run by the Native Village of Eyak and LGL Consulting. The spawning escapement estimate is generated by subtracting the upper Copper River state and federal subsistence, state personal use, and sport fishery harvest estimates from the mark-recapture estimate of the inriver abundance. The estimates for the federal and state subsistence and the state personal use fishery harvests are generally not available for ~6 months after the fishery is closed. Additionally, the sport fishery harvest estimate is based on the mail-out survey and is generally available ~12 months after the fishery ends.

[f] No estimates for chum salmon escapements are included for the Unakwik, Eshamy, Southwestern, or Montague districts because there are no escapement goals for those districts.

[g] The estimates for pink salmon (odd year) do not include Unakwik District escapements, due to absence of an escapement goal and an average escapement estimate of a few thousand fish.

[h] Kvichak River also has a pre-peak/peak-cycle escapement goal of 6-10 million sockeye, but between 2001 and 2009 only two years (2004 and 2009) were classified as either pre-peak or peak year. In the 2009/2010 review it was recommended that the two goals be combined into one SEG of 2-10 million fish.

[i] Naknek River has an OEG of 800,000-2,000,000 when the Naknek River Special Harvest Area (NRHSA) is open to fishing.

[j] Use the best estimate of sport harvest upstream of sonar.

[k] Yentna River sockeye salmon escapement goal was replaced by SEGs on Chelatna, Judd and Larson lakes in early 2009.

[l] The 2009 upper Copper River sockeye salmon spawning escapement estimate is pending the estimates of the federal and state subsistence, state personal use, and sport fishery harvests in addition to the mark-recapture estimate of upper Copper River Chinook salmon. However, the estimate will be within the SEG range.

[m] The Coghill River weir washed out on 22 July 2009, so this provides a minimum estimate.

Table 3.–Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2001 to 2009.

System	2009 Goal Range		Type	Year Implemented	Escapement								
	Lower	Upper			2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON													
Kuskokwim Area													
North (Main) Fork Goodnews River	640	3,300	SEG	2005	3,561	1,195	3,935	7,462	NS	4,159	NS	NS	NS
Middle Fork Goodnews River	1,500	2,900	BEG	2007	5,398	3,085	2,389	4,348	4,529	4,559	3,852	2,161	1,630
Kanektok River	3,500	8,000	SEG	2005	6,483	NS	6,206	28,375	13,926	8,433	NS	NS	NS
Kogrukluk River	5,300	14,000	SEG	2005	9,298	10,104	11,771	19,651	21,993	19,414	13,029	9,730	9,517
Kwethluk River	6,000	11,000	SEG	2007	NA	8,502	14,474	28,605	NA	14,224	13,267	5,312	5,710
Tuluksak River	1,000	2,100	SEG	2007	997	1,346	1,064	1,475	2,653	1,044	374	665	404
George River	3,100	7,900	SEG	2007	3,309	2,444	4,693	5,207	3,845	4,357	4,883	2,698	3,663
Kisaralik River	400	1,200	SEG	2005	NA	2,285	688	6,913	4,112	4,734	1,373	1,200	NS
Aniak River	1,200	2,300	SEG	2005	NA	1,856	3,514	5,569	NS	5,639	3,984	3,222	NS
Salmon River (Aniak R)	330	1,200	SEG	2005	598	1,236	1,292	2,177	4,097	NS	1,458	1,061	NS
Holitna River	970	2,100	SEG	2005	1,130	1,741	NS	4,842	2,795	3,924	NS	832	NS
Cheeneetnuk River (Stony R)	340	1,300	SEG	2005	NA	730	810	918	1,155	1,015	NS	290	323
Gagaryah River (Stony R)	300	830	SEG	2005	143	452	1,093	670	788	531	1,035	177	303
Salmon River (Pitka Fork)	470	1,600	SEG	2005	1,033	1,276	1,371	1,138	1,809	928	1,014	1,305	632
Yukon River													
East Fork Andreafsky River	960	1,700	SEG	2005	1,065	1,447	1,116	2,879	1,715	590	1,758	278	
West Fork Andreafsky River	640	1,600	SEG	2005	570	917	1,578	1,317	1,492	824	976	262	1,678
Anvik River	1,100	1,700	SEG	2005	1,420	1,713	1,100	3,679	2,421	1,876	1,529	992	832
Nulato River	940	1,900	SEG	2005	1,884	1,584	NS	1,321	553	1,292	2,583	922	2,260
Gisasa River	420	1,100	SEG	2005	1,298	506	NS	731	958	843	593	487	515
Chena River	2,800	5,700	BEG	2001	9,696	6,967	8,739	9,645	NS	2,936	3,576	3,212	5,253
Salcha River	3,300	6,500	BEG	2001	13,328	4,644	15,500	15,761	5,988	10,679	5,639	2,731	12,774
Canada Mainstem	45,000		Agreement	Annual	42,483	42,359	80,594	48,469	68,551	62,933	34,903	34,008	63,876
Norton Sound													
Fish River/Boston Creek	100		lower-bound SEG	2005	33	NS	240	112	46	NS	NS	NS	67[a]
Kwiniuk River	300	550	SEG	2005	261	778	744	663	342	195	194	237	444
North River (Unalakleet R)	1,200	2,600	SEG	2005	1,337	1,484	1,452	1,104	1,015	906	1,948	903	2,352
Shaktoolik River	400	800	SEG	2005	341	82[b]	15[b]	91[b]	74[c]	150[b]	412	NS	129[a]
Unalakleet/Old Woman River	550	1,100	SEG	2005	NS	61[b]	168[b]	398[b]	510[c]	NS	821	NS	1,368
CHUM SALMON													
Kuskokwim Area													
Middle Fork Goodnews River	12,000		lower-bound SEG	2005	26,820	30,300	21,637	31,616	26,690	54,699	49,285	44,699	19,713
Kanektok River	5,200		lower-bound SEG	2005	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Table 3.–Page 2 of 3.

System	2009 Goal Range Lower	2009 Goal Range Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Kogrukluk River	15,000	49,000	SEG	2005	30,569	51,570	23,413	24,201	197,707	180,597	49,505	44,978	83,711
Aniak River	220,000	480,000	SEG	2007	408,830	472,346	477,544	672,931	1,151,505	1,108,626	696,801	427,911	479,531
Yukon River Summer Chum													
East Fork Andreafsky River	65,000	130,000	BEG	2001	NA	45,019	22,603	62,730	20,127	102,260	69,642	57,259	8,770
Anvik River	350,000	700,000	BEG	2005	224,058	462,101	251,358	365,691	525,391	992,378	459,038	374,929	182,988
Mainstem Yukon River	600,000	1,000,000	OEG	2001	338,081	1,088,463	1,168,518	1,357,826	2,439,616	3,767,044	1,726,885	1,665,667	1,283,206
	300,000	600,000	BEG	2001									
Yukon River Fall Chum													
Yukon River Drainage	300,000	600,000	BEG	2001	338,000	398,000	695,000	538,000	1,997,000	874,000	917,000	560,000	463,000[e]
Tanana River	61,000	136,000	BEG	2001	117,000	138,000	230,000	124,000	419,000	223,000	359,000	ND	140,000
Delta River	6,000	13,000	BEG	2001	8,000	12,000	23,000	25,000	28,000	14,055	19,000	23,000	13,000
Toklat River	15,000	33,000	BEG	2001	6,000	29,000	21,000	35,000	NA	NA	NA	NA	NA
Upper Yukon River Tributaries	152,000	312,000	BEG	2001	187,000	135,000	271,000	195,000	1,056,000	436,000	327,000	248,000	NA
Chandalar River	74,000	152,000	BEG	2001	111,000	90,000	214,000	137,000	497,000	245,000	228,000	178,000	150,000
Sheenjek River	50,000	104,000	BEG	2001	54,000	32,000	44,000	38,000	438,000	160,000	65,000	50,000	54,000[e]
Fishing Branch River (Canada)	50,000	120,000	Agreement[d]	2001	22,000	14,000	30,000	20,000	121,000	30,000	34,000	20,000	26,000[e]
Yukon R. Mainstem (Canada)	80,000		Agreement	2001	34,000	99,000	143,000	154,000	438,000	211,000	227,000	174,000	92,000[e]
Norton Sound													
Subdistrict 1 Aggregate	23,000	35,000	BEG	2001	44,553	33,225	17,081	23,787	38,808	87,223	76,937	25,215	21,368
Sinuk River	4,000	6,200	SEG	2005	10,718	6,333	3,482	3,197	4,710	4,834	16,481	1,000[f]	2,232
Nome River	2,900	4,300	SEG	2005	2,859	1,720	1,957	3,903	5,584	5,678	7,034	2,607	1,565
Bonanza River	2,300	3,400	SEG	2005	4,745	3,199	1,664	2,166	5,534	708	8,491	1,000[f]	6,744
Snake River	1,600	2,500	SEG	2005	2,182	2,776	2,201	2,145	2,948	4,128	8,144	1,244	891
Solomon River	1,100	1,600	SEG	2005	1,949	2,150	806	1,436	1,914	2,062	3,469	1,000[f]	918
Flambeau River	4,100	6,300	SEG	2005	10,456	6,804	3,380	7,667	7,692	27,828	12,006	11,618	4,075
Eldorado River	6,000	9,200	SEG	2005	11,635	10,243	3,591	3,273	10,426	41,985	21,312	6,746	4,943
Niukluk River	30,000		lower-bound SEG	2005	30,662	35,307	20,018	10,770	25,598	29,199	50,994	12,078	15,879
Kwiniuk River	11,500	23,000	OEG	2001	16,598	37,995	12,123	10,362	12,083	39,519	27,756	9,462	8,733
Tubutuluk River	9,200	18,400	OEG	2001	NS	NS	1,799	NS	4,842	NS	7,045	NS	3,161
Unalakleet/Old Woman River	2,400	4,800	SEG	2005	NS	NS	NS	NS	1,530	NS	1,902	NS	7,143
Kotzebue Sound													
Kotzebue Sound Aggregate	196,000	421,000	BEG	2007									
Noatak and Eli Rivers	42,000	91,000	SEG	2007	NS	NS	NS	53,058	NS	39,785	NS	270,747	69,872
Upper Kobuk w/ Selby River	9,700	21,000	SEG	2007	13,420	NS	11,175	26,018	NS	48,750	NS	42,622	45,155
Salmon River	3,300	7,200	SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tutuksuk River	1,400	3,000	SEG	2007	NS	NS	NS	NS	1,736	NS	NS	NS	NS
Squirrel River	4,900	10,500	SEG	2007	NS	NS	NS	NS	NS	NS	NS	NS	NS

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Table 3.–Page 3 of 3.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
COHO SALMON													
Kuskokwim Area													
Middle Fork Goodnews River	12,000		lower-bound SEG	2005	19,387	27,364	52,810	47,916	15,683	15,969	20,975	36,630	19,933
Kogrukluk River	13,000	28,000	SEG	2005	19,387	14,516	74,604	27,041	24,113	17,011	27,033	29,661	23,009
Yukon River													
Delta Clearwater River	5,200	17,000	SEG	2005	47,000	39,000	106,000	38,000	34,000	17,000	15,000	7,500	17,000
Norton Sound													
Kwiniuk River	650	1,300	SEG	2005	NS	NS	760	1,237	NS	NS	5,174	2,676	NS
Niukluk River	2,400	6,100	SEG	2007	3,468	7,391	1,282	2,064	2,727	11,169	3,498	13,779	6,861
North River (Unalakleet R.)	550	1,100	SEG	2005	NS	800	NS	1,386	1,963	NS	2,349	2,744	2,830
PINK SALMON													
Kuskokwim Area													
There are no escapement goals for pink salmon in the Kuskokwim Management Area.													
Yukon River													
There are no escapement goals for pink salmon in the Yukon River drainage.													
Norton Sound													
Nome River (odd year)	3,200		lower-bound SEG	2005	3,138		11,402		285,759		24,395		16,490
Nome River (even year)	13,000		lower-bound SEG	2005		35,057		1,051,146		578,555		1,186,554	
Kwiniuk River	8,400		lower-bound SEG	2005	8,423	1,114,410	22,329	3,054,684	341,048	1,347,087	54,255	1,442,249	42,957
Niukluk River	10,500		lower-bound SEG	2005	41,625	636,404	75,855	1,022,236	270,424	1,371,919	43,617	669,234	24,204
North River	25,000		lower-bound SEG	2005	24,737	321,756	280,212	1,149,294	1,670,934	2,169,890	583,320	240,286	189,939
SOCKEYE													
Kuskokwim Area													
North (Main) Fork Goodnews R.	5,500	19,500	SEG	2005	29,340	2,626	50,140	31,695	NS	78,100	NS	NS	NS
Middle Fork Goodnews River	18,000	40,000	BEG	2007	21,024	22,101	44,387	55,926	113,809	126,772	72,282	50,459	25,460
Kanektok River	14,000	34,000	SEG	2005	38,610	NS	21,335	78,380	110,730	382,800	NS	NS	NS
Yukon River													
There are no escapement goals for Sockeye in the Yukon River drainage.													
Norton Sound													
Salmon Lake/Grand Central River	4,000	8,000	SEG	2005	9,400	3,592	20,290	25,860	42,240	41,780	20,112	11,672	272
Glacial Lake	800	1,600	SEG	2005	2,020	320	865	970	3,730	5,810	1,505	540	169

Note: NA = data not available; NS = no survey; ND = not determined yet.

[a] 2009 aerial surveys of the Shaktoolik River and Boston Creek are rated as incomplete as they were conducted on August 9 and 12, respectively, well after peak Chinook salmon spawning. Several carcasses and moribund Chinook were observed on survey.

[b] 2002-2004 and 2006 Shaktoolik River and combined Unalakleet and Old Woman Rivers surveys are not considered complete as they were conducted well before peak spawn. Surveys during these years were rated as acceptable, but the observer noted difficulty enumerating Chinook salmon due to large numbers of pink salmon. No Unalakleet River drainage surveys conducted in 2006.

[c] 2005 Shaktoolik and Unalakleet River drainage surveys conducted in 2005 were conducted during peak spawning periods but Chinook salmon counts thought to be underestimated due to large numbers of pink salmon.

[d] Fishing Branch River fall chum salmon IMEG (Interim Minimum Escapement Goal) 2008-2010 is 22,000 to 49,000.

[e] All 2009 data are preliminary for mainstem. Need subsistence harvest, Delta River is only peak count not population estimate, Tanana and Chandalar rivers are expected to be >100,000 each.

[f] In 2008, unable to see chum salmon in the Bonanza, Sinuk and Solomon Rivers because of large number of pink salmon. Arbitrarily assigned 1,000 chum salmon to each river.

Table 4.–Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon escapement goals and escapements, 2001 to 2009.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON													
AK Peninsula													
Nelson River	2,400	4,400	BEG	2004	5,543	6,750	5,154	6,959	4,993	2,516	2,492	5,012	2,048
Chignik													
Chignik River	1,300	2,700	BEG	2002	3,028	3,541	6,412	7,840	6,486	3,535	2,000	1,730	1,680
Kodiak													
Karluk River[a]	3,600	7,300	BEG	2003	4,453	7,175	7,256	7,525	4,798	3,548	1,544	752	1,308
Ayakulik River[b]	4,800	9,600	BEG	2003	13,929	12,552	17,557	24,830	8,340	3,106	6,410	3,071	2,615
CHUM SALMON													
AK Peninsula													
Northern District	119,600	239,200	SEG	2007	285,900	262,800	214,660	139,350	103,675	382,583	243,334	228,537	154,131
Northwestern District	100,000	215,000	SEG	2007	406,800	417,100	236,000	295,600	192,965	193,460	335,450	241,750	84,460
Southeastern District[c]	106,400	212,800	SEG	1992	318,300	204,150	218,810	367,200	412,500	405,300	201,451	277,450	106,500
South Central District	89,800	179,600	SEG	1992	155,500	129,400	79,000	184,800	235,700	119,600	126,000	140,450	18,600
Southwestern District	133,400	266,800	SEG	1992	277,021	268,000	193,030	180,000	317,910	231,935	398,010	171,250	385,730
Unimak District	800		lower-bound SEG	2007	400	1,200	200	400	4,200	7,915	1,200	2,800	1,400
Chignik													
Entire Chignik Area	57,400		lower-bound SEG	2008	550,800	235,634	300,325	349,518	308,700	93,489	238,098	197,259	214,959
Kodiak													
Mainland District	104,000		lower-bound SEG	2008	294,700	197,175	114,750	364,395	37,500	346,140	87,350	122,425	103,656
Kodiak Archipelago Aggregate	151,000		lower-bound SEG	2008	263,225	333,416	265,773	168,696	206,755	441,409	206,983	101,482	202,039
COHO SALMON													
AK Peninsula													
Nelson River	18,000		lower-bound SEG	2004	36,000	38,000	28,000	52,500	24,000	19,000	19,000	24,000	22,000
Thin Point Lake	3,000		lower-bound SEG	2004	28,000	18,000	25,000	9,600	17,500	9,750	9,000	3,200	900
Chignik													
There are no coho salmon stocks with escapement goals in Chignik Area													
Kodiak													
Pasagshak River	1,200	3,300	SEG	2005	5,707	5,825	8,886	3,402	3,773	937	1,896	3,875	2,385
Buskin River	3,200	7,200	BEG	2005	13,494	10,649	13,150	9,599	16,596	13,348	9,001	9,028	10,624

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Table 4.–Page 2 of 3.

System	2009 Goal Range Lower	Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Olds River	1,000	2,200	SEG	2005	3,454	580	1,534	1,860	2,495	1,912	868	697	656
American River	400	900	SEG	2005	533	1,034	511	753	339	2,033	307	700	639
PINK SALMON													
AK Peninsula													
Bechevin Bay Section (odd year)	1,600		lower-bound SEG	2004	6,500		800		8,720		16,800		72,000
Bechevin Bay Section (even year)	31,000		lower-bound SEG	2004		10,700		84,300		116,075		11,900	
South Peninsula Total (odd year)	1,637,800	3,275,700	SEG	2007	2,965,120		5,511,220		6,165,634		2,680,213		3,067,000
South Peninsula Total (even year)	1,684,600	3,729,300	SEG	2007		3,762,800		8,289,410		2,862,250		3,338,370	
Chignik													
Entire Chignik Area (odd year)	500,000	800,000	SEG	2008	1,392,581		1,709,805		1,414,050		1,169,600		865,090
Entire Chignik Area (even year)	200,000	600,000	SEG	2008		832,879		830,060		356,425		840,960	
Kodiak													
Mainland District	250,000	750,000	SEG	2005	407,000	901,925	1,008,550	711,555	268,050	778,200	315,300	236,500	430,100
Kodiak Archipelago	2,000,000	5,000,000	SEG	2005	2,986,620	7,494,477	4,088,412	8,074,963	3,688,158	5,086,372	2,208,678	2,924,708	4,707,894
SOCKEYE SALMON													
AK Peninsula													
Cinder River	12,000	48,000	SEG	2007	51,204	11,500	88,700	55,050	96,000	52,100	123,000	96,800	102,600
Ilnik River	40,000	60,000	SEG	1991	58,000	43,000	69,000	82,000	154,000	88,000	93,000	44,300	66,000
Meshik River	20,000	60,000	SEG	2007	100,500	47,250	94,000	82,200	96,100	114,010	45,500	61,250	63,500
Sandy River	34,000	74,000	SEG	2007	51,000	49,000	66,000	32,000	101,000	48,000	44,700	32,200	36,000
Bear River Early Run	176,000	293,000	SEG	2004	177,495	178,480	226,201	354,565	332,248	262,995	206,233	125,526	216,237
Bear River Late Run	117,000	195,000	SEG	2004	300,000	96,520	139,799	80,435	221,752	182,005	224,767	195,474	133,263
Nelson River	97,000	219,000	BEG	2004	201,962	315,689	343,511	480,097	303,000	215,000	180,000	141,600	157,000
Christianson Lagoon	25,000	50,000	SEG	1980s	36,400	42,700	52,200	75,400	54,500	41,505	43,525	114,000	48,100
Swanson Lagoon	6,000	16,000	SEG	2007	10,600	10,000	16,100	24,300	2,400	376	9,200	5,500	1,000
North Creek	4,400	8,000	SEG	late 1980s	8,000	10,100	10,200	15,000	45,000	7,530	16,800	38,000	8,000
Orzinski Lake	15,000	20,000	SEG	1992	31,200	42,849	70,690	75,450	44,797	18,000	10,643	36,839	21,457
Mortensen Lagoon	3,200	6,400	SEG	late 1980s	9,100	5,205	16,804	7,215	21,703	14,688	6,200	5,600	25,000
Thin Point Lake	14,000	28,000	SEG	late 1980s	47,900	51,000	40,000	34,500	21,000	11,510	21,550	18,900	33,500
Chignik													
Chignik River Early Run	350,000	400,000	SEG	2005	744,013	380,701	350,004	363,800	355,091	366,497	361,091	377,579	391,476
Chignik River Late Run[d]	200,000	400,000	SEG	2008	392,905	343,616	334,119	214,459	225,336	368,996	293,883	328,479	328,586

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Table 4.–Page 3 of 3.

System	2009 Goal Range Lower	2009 Goal Range Upper	Type	Year Implemented	Escapement 2001	2002	2003	2004	2005	2006	2007	2008	2009
Kodiak													
Malina Creek	1,000	10,000	SEG	2005	22,490	32,214	12,000	20,000	3,180	6,400	1,900	3,690	1,400
Afognak (Litnik) River	20,000	50,000	BEG	2005	24,271	19,520	27,766	15,181	21,577	22,933	21,070	26,874	31,358
Little River	3,000		lower-bound SEG	2008	2,700	36,000	50,500	16,000	3,000	3,500	8,500	2,300	1,500
Uganik Lake	24,000		lower-bound SEG	2008	3,500	25,400	51,000	83,600	7,500	26,700	35,000	64,700	53,700
Karluk River Early Run	110,000	250,000	BEG	2008	337,098	453,495	448,001	389,041	268,301	200,641	279,390	82,071	52,466
Karluk River Late Run	170,000	380,000	BEG	2005	526,438	412,081	630,709	331,162	513,661	289,732	267,185	164,419	277,611
Ayakulik River	200,000	500,000	SEG	2005	218,892	229,292	197,892	275,238	251,906	87,780	283,042	162,888	315,184
Upper Station River Early Run	30,000	65,000	SEG	2005	66,794	36,802	76,175	78,487	60,349	24,997	31,895	38,800	34,585
Upper Station River Late Run	120,000	265,000	BEG	2005	74,407	150,349	200,894	177,108	156,401	153,153	149,709	184,856	161,736
Frazer Lake	75,000	170,000	BEG	2008	85,317	85,317	201,679	120,664	136,948	89,516	120,186	105,363	101,845
Saltery Lake	15,000	30,000	BEG	2001	45,608	36,336	57,993	54,800	28,500	28,000	17,200	49,266	46,591
Pasagshak River	3,000	12,000	SEG	2005	3,800	4,750	8,000	46,400	22,000	6,300	14,300	14,900	1,400
Buskin Lake	8,000	13,000	SEG	1996	20,556	17,174	23,870	22,023	15,468	17,734	16,502	5,900	7,757

Note: NA = data not available.

[a] The 2006 and 2007 escapements for Karluk River Chinook salmon = (management objective (weir count)) - (sportfish catch above the weir). Subsistence harvest data are not available. The 2008 and 2009 escapements are weir counts only.

[b] The 2007 escapement for Ayakulik River Chinook salmon = (management objective (weir count)) - (sportfish catch above weir). Subsistence harvest data are not available. The 2008 and 2009 escapements are weir counts only.

[c] Southeastern District chum salmon escapement goal includes Shumagin Islands Section and the Southeastern District Mainland.

[d] The Chignik late-run sockeye escapement objective (July 5 – September 15) includes the late-run sockeye salmon sustainable escapement goal (SEG; 200,000 – 400,000) plus an additional 50,000 sockeye salmon inriver run goal (25,000 in August and 25,000 in September) to meet late season subsistence needs.

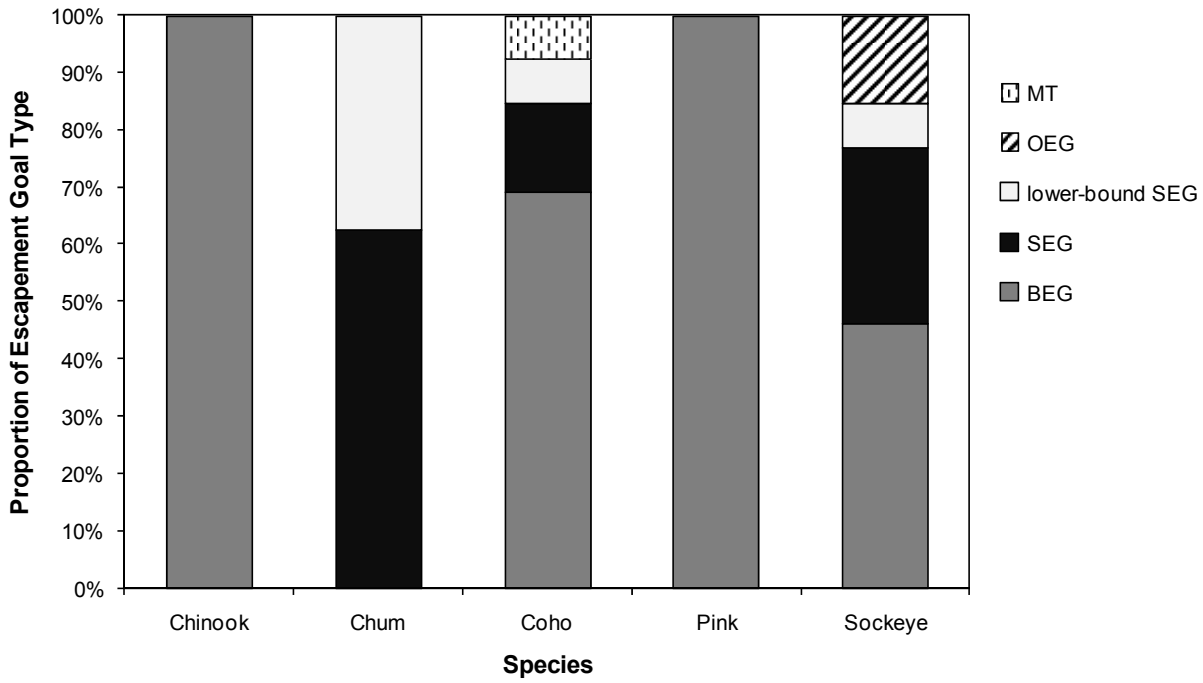

Figure 2.–Proportion of escapement goal types by species in Southeast Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and MT is management target.

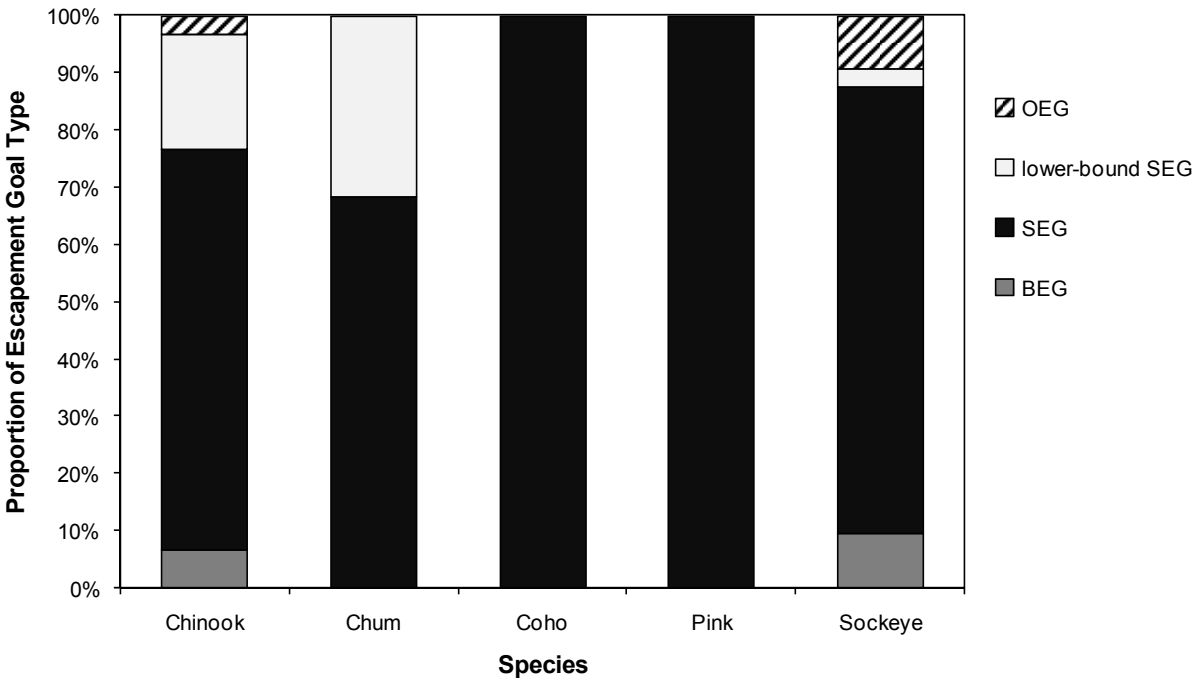

Figure 3.–Proportion of escapement goal types by species in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River). BEG is biological escapement goal, SEG is sustainable escapement goal, and OEG is optimal escapement goal (set by the Alaska Board of Fisheries).

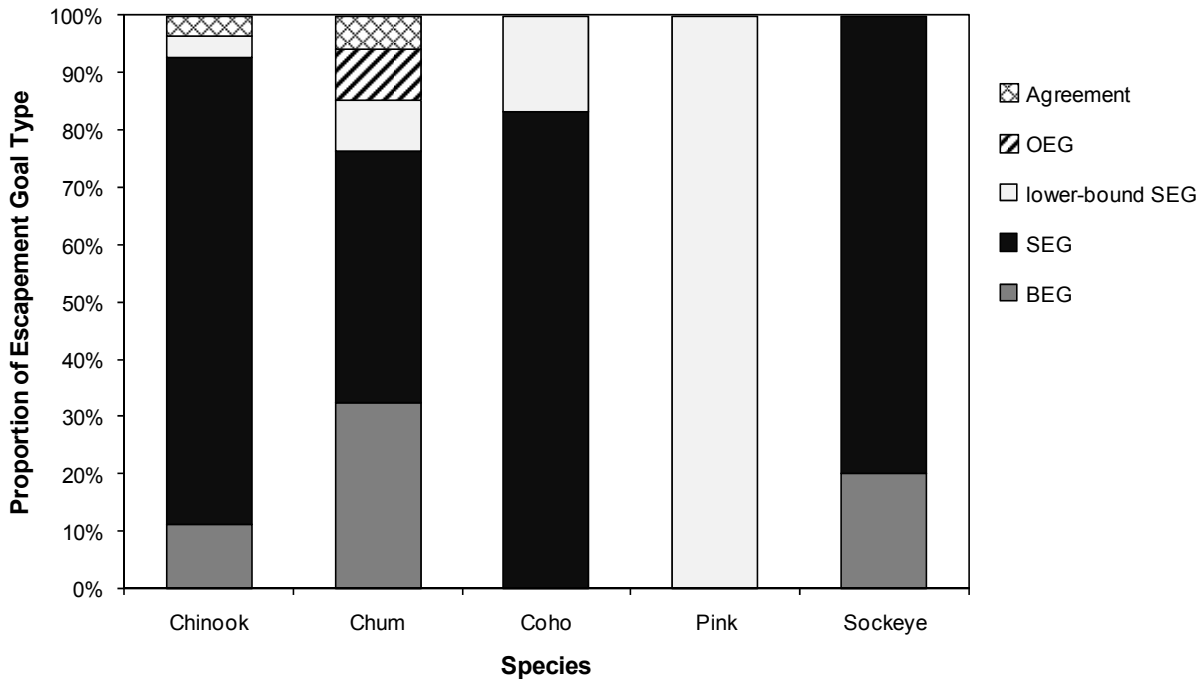

Figure 4.–Proportion of escapement goal types by species in Arctic-Yukon-Kuskokwim Region. BEG is biological escapement goal, SEG is sustainable escapement goal, OEG is optimal escapement goal (set by the Alaska Board of Fisheries), and agreement goals are established through international treaties.

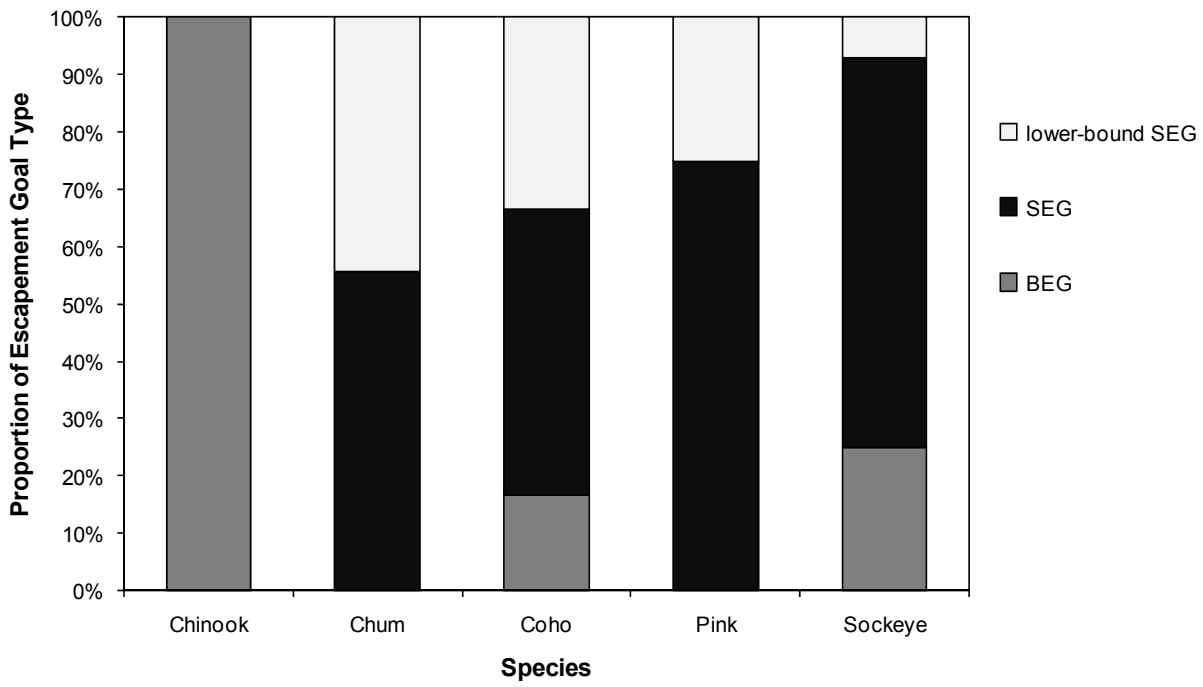

Figure 5.–Proportion of escapement goal types by species in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas). BEG is biological escapement goal and SEG is sustainable escapement goal.

Table 5.–Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Southeast Region.

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
Chinook salmon	Blossom River	Under	Under	Under	Met	Met	Met	Under	Met	Under
	Keta River	Met	Met	Met	Met	Met	Over	Met	Met	Under
	Unuk River	Over	Met	Met	Met	Met	Met	Met	Met	Met[a]
	Chickamin River	Over	Over	Over	Met	Over	Over	Met	Over	Met
	Andrew Creek	Over	Over	Met	Over	Over	Over	Over	Met	Under
	Stikine River	Over	Over	Over	Over	Over	Met	Met	Met	Under
	King Salmon River	Met	Met	Under	Met	Met	Met	Met	Met	Under
	Taku River	Met	Over	Met	Over	Met	Met	Under	Under	Met[b]
	Chilkat River	Over	Over	Over[c]	Met	Met	Met	Under	Met	Over
	Klukshu (Alsek) River	Met	Met	Met	Over	Under	Under	Under	Under	Met
	Situk River	Met	Met	Over[b]	Met	Met	Met	Met	Under	Met
Chum salmon	Southern Southeast Summer									Under
	Northern Southeast Inside Summer									Under
	Northern Southeast Outside Summer									Under
	Cholmondeley Sound Fall									Met
	Port Camden Fall									Under
	Security Bay Fall									Met
	Excursion River Fall									Under
	Chilkat River Fall									Over
Coho salmon	Hugh Smith Lake	Over	Over	Over	Met	Over	Met	Over	Over	Over[b]
	Taku River	Met	Met	Met	Met	Met	Met	Met	Met	Met
	Auke Creek	Over	Over	Over	Met	Met	Over	Met	Over	Met
	Montana Creek	Over	Over	Over	Met	Met	Met[b]	Under	Met	Met
	Peterson Creek	Met	Met	Met	Met	Met	Over[b]	Met	Over	Met
	Ketchikan Survey Index						Met	Met	Over	Met
	Sitka Survey Index						Over	Over	Over	Over
	Ford Arm Lake	Over	Over	Over	Over	Over	Over	Over	Over	Over
	Berners River	Over	Over	Over	Over	Met	Met	Under	Met	Met
	Chilkat River						Over	Under	Met	Met
	Lost River	Met	Over	Met	Met	Under	Met	Met	NA	Met[d]
	Situk River	Met	Over	Met	Over	Under	Met	Met	NA	Met
	Tsiu/Tsivat Rivers	Met	Over	Over	NA	Met	Met	Met	Met	Met
Pink salmon	Southern Southeast	Over	Over	Over[b]	Met	Over	Met	Over	Met	Met[e]
	Northern Southeast Inside			Met[f]	Under	Met	Under	Under	Under	Met[e]
	Northern Southeast Outside			Over[f]	Over	Over	Over	Over	Met	Met[e]
	Situk River (even-year)		Met		Over		Over		Over	
	Situk River (odd-year)	Met		Over		Over		Over		Met
Sockeye salmon	Hugh Smith Lake	Under	Under	Over[b]	Over	Over	Over	Over	Under	Met
	McDonald Lake	Under	Under	Over	Under	Under	Under[b]	Under	Under	Under[b]
	Mainstem Stikine River	Over	Met	Over	Met	Met	Met	Met	Under	Met
	Tahltan Lake	Under	Under	Over	Over	Over	Over	Met	Under	Over
	Speel Lake	Met	Met	Met[b]	Met	Met	Met	Under	Under	Under
	Taku River	Over	Over	Over	Over	Over	Over	Over	Under	Met
	Redoubt Lake			Over	Over	Over	Over	Over	Met	Met

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Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Chilkat Lake	Over	Over	Over	Over	Met	Under[g]	Under	Under	Over[b]
	Chilkoot Lake	Met	Met	Met	Met	Met	Over[b]	Met	Under	Under[b]
	East Alsek-Doame River	Under	Under	Over[b]	Over	Over	Over	Over	Under	Under
	Klukshu River	Met	Over	Over	Met	Under	Met	Met	Under	Under
	Lost River	Met	Met	Over	Met	Met	Met	Under	Under	NA[d]
	Situk River	Met	Met	Over[h]	Met	Met	Over	Met	Under	Over

Note: NA = data not available. Blank cells indicate that there was no official escapement goal for the stock in that particular year.

[a] Prior to 2009 goal was based on index count of escapements.

[b] Escapement goal reevaluated, goal range changed.

[c] Escapement goal reevaluated, point goal changed to a range.

[d] Escapement goal reevaluated, upper bound eliminated, lower bound remained the same.

[e] Expansion factor was removed from escapement estimates and escapement goal was reevaluated.

[f] Northern Southeast was split into Northern Southeast Inside and Northern Southeast Outside in 2003.

[g] Prior to 2005 escapement goal was based on weir counts. After 2005 escapements and escapement goal were based on mark-recapture estimates see DerHovanisian and Geiger (2005).

[h] Escapement goal reevaluated, goal type changed but goal range remained the same.

Table 6.–Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River).

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
Chinook salmon	*Bristol Bay*									
	Nushagak River	Over	Over	Over	Over	Over	Over	Met[a]	Over	Met
	Togiak River	Over	Under	NS	NS	NS	NS	NS[b]	NS	NS
	Naknek River	Over	Over	Over	Over	NS	NS	Met[b]	Met	Under
	Alagnak River							Met	Under	Under
	Egegik River							Met	Under	Under
	Upper Cook Inlet									
	Alexander Creek	Under	Under[a]	Under	Met	Met	Under	Under	Under	Under
	Campbell Creek	Over	Over[a]	Over	Over	Eliminated			Met[c]	Met
	Chuitna River	Over	Met[a]	Met	Over	Met	Met	Under	Under	Under
	Chulitna River	Over	Over[a]	NS	Met	Met	Met	Over	Met	Met
	Clear (Chunilna) Creek	Over	Over[a]	NS	Over	Met	Met	Met	Met	Met
	Crooked Creek	Over	Met[a]	Over	Over	Over	Met	Met	Met	Under
	Deshka River	Over	Over[a]	Over	Over	Over	Over	Met	Under	Under
	Goose Creek	NS	Met[a]	Under	Met	Met	Met	Under	Under	Under
	Kenai River - Early Run	Met	Under	Met	Met	Over[d]	Over	Over	Over	Over
	Kenai River - Late Run	Met	Met	Met	Over	Met	Met	Met	Met	Met
	Lake Creek	Over	Met[a]	Over	Over	Met	Met	Met	Under	Under
	Lewis River	Over	Met[a]	Over	Over	Met	Met	Under	Under	Under
	Little Susitna River	Over	Met[a]	Met	Met	Over	Over	Met	Met	Met
	Little Willow Creek	Over	Met[a]	Met	Over	Met	Met	Met	NC	Met
	Montana Creek	Over	Met[a]	Met	Met	Met	Met	Met	Met	Met
	Peters Creek	Over	Over[a]	Over	Over	Met	Met	Met	NC	Met
	Prairie Creek	Over	Met[a]	Met	Met	Met	Met	Met	Under	Met
	Sheep Creek	NS	Met[a]	NS	Under	Met	Under	Under	NC	Under
	Talachulitna River	Over	Over[a]	Over	Over	Met	Over	Met	Met	Met
	Theodore River	Over	Met[a]	Met	Under	Under	Met	Under	Under	Under
	Willow Creek	Over	Met[a]	Over	Over	Met	Met	Under	Under	Under
	Lower Cook Inlet									
	Anchor River	Under	Under[d]	Under	Over	Eliminated			Met[e]	Under
	Deep Creek	Met	Met[d]	Over	Over	Over	Met	Met	Under	Met
	Ninilchik River	Met	Met[d]	Under	Met	Met	Met	Met	Met[f]	Under
	Prince William Sound									
	Copper River	Met	Under	Met[g]	Met	Under	Met	Met	Met	NA
Chum salmon	*Bristol Bay*									
	Nushagak River							Under	Met	Met
	Upper Cook Inlet									
	Clearwater Creek	Over	Over[a]	Met	Met	NA	NA	NA	Met	Met
	Lower Cook Inlet									
	Port Graham River	Met	Over[d]	Met	Under	Under	Met	Met	Met	Under
	Dogfish Lagoon	Met	Over[d]	Over	Met	Under	Met	Met	Met	Met
	Rocky River	Under	Over[a]	Over	Over	Over	Over	Met	Met	Met
	Port Dick Creek	Under	Over[a]	Over	Over	Over	Met	Met	Over	Over
	Island Creek	Under	Met[d]	Over	Met	Over	Under	Under	Met	Met
	Big Kamishak River	Over	Met[a]	Met	Over	Over	Over	Met	Under	Met
	Little Kamishak River	Over	Met[a]	Met	Over	Met	Over	Met	Met	Under

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Table 6.–Page 2 of 3.

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	McNeil River	Under	Met[d]	Over	Met	Met	Met	Met	Under[h]	Met
	Bruin River	Met	Met[d]	Over	Over	Over	Met	Under	Over	Met
	Ursus Cove	Met	Over[d]	Over	Over	Over	Over	Over	Met	Over
	Cottonwood Creek	Met	Over[a]	Over	Over	Over	Over	Over	Met	Over
	Iniskin Bay	Over	Over[a]	Over	Over	Over	Over	Under	Over	Over
	Prince William Sound									
	Eastern District	Over	Met	Over[d]	Met	Met	Met[i]	Met	Met	Met
	Northern District	Over	Met	Met[d]	Met	Met	Met[i]	Met	Met	Met
	Coghill District	Under	Under	Met[d]	Met	Met	Met[i]	Met	Met	Met
	Northwestern District	Under	Under	Met[d]	Met	Met	Met[i]	Met	Met	Met
	Southeastern District	Over	Over	Over[d]	Over	Over	Met[i]	Met	Met	Met
Coho salmon	*Upper Cook Inlet*									
	Jim Creek	Over	Over[a]	Over	Over	Over	Over	Over	Over	Over
	Little Susitna River	Over	Over[d]	Met	Over	Met	NA	Met	Over	Under
	Prince William Sound									
	Copper River Delta	Met	Over	Over[j]	Over	Over	Over	Met	Over	Met
	Bering River	Met	Over	Met[j]	Met	Over	Over	Over	Met	Met
Pink salmon	*Lower Cook Inlet*									
	Humpy Creek	Met	Met[d]	Over	Met	Over	Met	Met	Over	Under
	China Poot Creek	Over	Met[a]	Met	Met	Over	Met	Met	Met	Under
	Tutka Creek	Under	Met[d]	Over	Over	Over	Over	Under	Met	Under
	Barabara Creek	Under	Met[d]	Met	Met	Over	Met	Over	Over	Met
	Seldovia Creek	Under	Met[d]	Met	Over	Over	Over	Over	Over	Under
	Port Graham River	Under	Over[d]	Met	Over	Over	Over	Over	Over	Met
	Port Chatham	Over	Met[d]	Over	Over	Over	Over	Met	Met	Over
	Windy Creek Right	Over	Over[a]	Over	Over	Over	Over	Over	Over	Over
	Windy Creek Left	Over	Met[d]	Over	Met	Over	Over	Met	Over	Over
	Rocky River	Over	Over[a]	Over	Met	Over	Over	Over	Over	Over
	Port Dick Creek	Met	Over[d]	Over	Under	Over	Met	Met	Met	Met
	Island Creek	Over	Over[d]	Over	Over	Met	Over	Over	Over	Over
	S. Nuka Island Creek	Over	Over[a]	Over	Met	Met	Met	Met	Met	Over
	Desire Lake Creek	Over	Over[d]	Over	Over	Over	Over	Met	Met	Over
	Bear & Salmon Creeks					Over	Met	NA	NA	NA
	Thumb Cove	Under	Met[a]	Met	Met	Met	Met	NA	NA	NA
	Humpy Cove	Under	Met[a]	Met	Met	Over	Met	NA	NA	NA
	Tonsina Creek	Under	Over[a]	Met	Met	Over	Over	NA	NA	NA
	Bruin River	Under	Over[d]	Met	Met	Met	Over	Over	Met	Over
	Sunday Creek	Over	Over[d]	Over	Over	Over	Over	Over	Met	Over
	Brown's Peak Creek	Met	Over[d]	Over	Met	Over	Over	Over	Met	Over
	Prince William Sound									
	All Districts Combined (even year)			[k]	Met		Under		Under	
	All Districts Combined (odd year)			Over[k]		Over		Met		Met
Sockeye salmon	*Bristol Bay*									
	Kvichak River (off-peak)	Under	Under	Under	Under[l]	Met	Met	Met	Met	Under[l]
	Alagnak River	Over	Over	Over	Over	Over	Over	Met[g]	Met	Met
	Naknek River	Over	Met	Over	Over	Over	Over	Over	Over	Met

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Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Egegik River	Met	Met	Met	Met	Over	Over	Over	Met	Met
	Ugashik River	Met	Met	Met	Met	Met	Met	Over	Met	Over
	Wood River	Met	Met	Met	Over	Met	Over	Over	Over	Met
	Igushik River	Over	Under	Met	Under	Over	Over	Over	Over	Over
	Nushagak River	Over	Met	Met	Met	Over	Met	Met	Met	Met
	Togiak River	Over	Met	Over	Met	Met	Over	Met[d]	Met	Over
	Upper Cook Inlet									
	Crescent River	Over	Over[j]	Over	Over	Over[d]	Over	Over	Met	NS
	Fish Creek (Knik)	Under	Over[a]	Over	Met	Under	Met	Met	Under	Over
	Kasilof River	Over	Met[m]	Over	Over	Over	Over	Over	Met	Met
	Kenai River	Under	Met	Met	Over	Over	Over	Met	Under	Met
	Packers Creek	NS	NS	NS	NS	Eliminated			Met[c]	Met
	Russian River - Early Run	Over	Over[a]	Met	Over	Over[j]	Over	Met	Met	Over
	Russian River - Late Run	Over	Met[a]	Over	Met	Met[d]	Met	Met	Met	Met
	Yentna River	Under	Under[d]	Over	Under	Under	Met	Under	Met	
	Chelatna Lake									Under
	Judd Lake									Met
	Larson Lake									Met
	Lower Cook Inlet									
	English Bay	Met	Over[d]	Over	Over	Met	Over	Over	Met	Over
	Delight Lake	Over	Over[a]	Met	Met	Over	Met	Over	Over	Over
	Desire Lake	Under	Over[a]	Under	Met	Under	Over	Met	Met	Over
	Bear Lake	Over	Over[d]	Over	Met	Over	Over	Over	Over	Over
	Aialik Lake	Over	Met[d]	Met	Over	Met	Met	Met	Met	Under
	Mikfik Lake	Met	Over[d]	Over	Over	Under	Over	Met	Under	Over
	Chenik Lake	Under	Met[a]	Over	Over	Over	Over	Over	Over	Over
	Amakdedori Creek	Over	Over[a]	Over	Over	Met	Under	Over	Over	Met
	Prince William Sound									
	Upper Copper River	Met	Over	Met[d]	Met	Over	Over	Over	Met	NA
	Copper River Delta	Under	Met	Met[d]	Met	Met	Met	Met	Met	Met
	Bering River	Under	Under	Met[d]	Met	Met	Under	Met	Under	Under
	Coghill Lake	Over	Met	Over[d]	Met	Met	Met[j]	Over	Met	Under
	Eshamy Lake	Over	Over	Met[d]	Under	Met	Over	Under	Under	Met[d]

Note: NA = data not available; NC = no count; NS = no survey. There are no escapement goals for coho salmon in Bristol Bay or Lower Cook Inlet and there are no pink salmon escapement goals in Bristol Bay or Upper Cook Inlet.

[a] Escapement goal reevaluated, point goal changed to a range.

[b] Escapement goal reevaluated, point goal changed to a lower-bound goal.

[c] Previous escapement goal reinstated.

[d] Escapement goal reevaluated, goal range changed.

[e] Escapement goal from 2001-2004 based on aerial surveys, escapement numbers in Table 2 are not comparable.

[f] Escapement goal reevaluated, current goal based on escapement count over longer period during spawning season, escapement numbers in Table 2 are based on longer counting time.

[g] Escapement goal reevaluated, goal range changed to a lower-bound goal.

[h] Escapement goal reevaluated, escapement goal in place prior to 2002 was reinstated. Escapement goal in place from 2002 to 2007 was based on escapement estimates using a different aerial survey index expansion method see Otis and Szarzi 2007.

[i] Escapement goal reevaluated, upper bound eliminated, lower bound remained the same.

[j] Escapement goal reevaluated, goal type changed but goal range remained the same.

[k] Aggregate goal established to replace individual district level goals.

[l] 2004 and 2009 were identified as pre-peak/peak escapement years for Kvichak River sockeye salmon and evaluated against the 6-10 million escapement goal.

[m] OEG established.

Table 7.– Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Arctic-Yukon-Kuskokwim Region.

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
Chinook salmon	*Kuskokwim Area*									
	North (Main) Fork Goodnews River	Met	Under	Met	Met	NS[a]	Over	NS	NS	NS
	Middle Fork Goodnews River	Met	Under	Under	Met	Over[a]	Over	Over[b]	Met	Met
	Kanektok River	Met	NS	Met	Met	Over[a]	Over	NS	NS	NS
	Kogrukluk River	Under	Met	Met	Met	Over[a]	Over	Met	Met	Met
	Kwethluk River	NA	Met	Over	Over	Over	NA	Over[c]	Under	Under
	Tuluksak River							Under	Under	Under
	George River							Met	Under	Met
	Kisaralik River	Met	Met	Under	Met	Over[a]	Over	Over	Met	NS
	Aniak River	Met	Met	Met	Met	NS[a]	Over	Over	Over	NS
	Salmon River (Aniak R)	Under	Met	Met	Met	Over[a]	NS	Over	Met	NS
	Holitna River	Under	Under	NS	Met	Over[a]	Over	NS	Under	NS
	Cheeneetnuk River (Stony R)					Met	Met	NS	Under	Under
	Gagaryah River (Stony R)					Met	Met	Over	Under	Met
	Salmon River (Pitka Fork)	Under	Under	Met	Under	Over[a]	Met	Met	Met	Met
	Yukon River									
	East Fork Andreafsky River	Under	Under	Under	Met	Over[a]	Under	Over	Under	
	West Fork Andreafsky River	Under	Under	Met	Under	Met[a]	Met	Met	Under	Over
	Anvik River	Met	Met	Under	Met	Over[a]	Over	Met	Under	Under
	Nulato River	Met	Met	NS	Met	Under[a]	Met	Over	Under	Over
	Gisasa River	Met	Under	NS	Met	Met[a]	Met	Met	Met	Met
	Chena River	Over	Over	Over	Over	NS	Met	Met	Met	Met
	Salcha River	Over	Met	Over	Over	Met	Over	Met	Under	Over
	Canada Mainstem[d]	Met	Met	Met	Met	Met	Met	Met	Under	Met
	Norton Sound									
	Fish River/Boston Creek	Under	NS	Met	Met	Under[e]	NS	NS	NS	Under
	Kwiniuk River	Under	Over	Over	Over	Met[f]	Under	Under	Under	Met
	North River (Unalakleet R)	Met	Met	Met	Under	Under[b]	Under	Met	Under	Met
	Shaktoolik River	Under	Under	Under	Under	Under[f]	Under	Met	NS	Under
	Unalakleet/Old Woman River	NS	Under	Under	Under	Under[f]	NS	Met	NS	Over
Chum salmon	*Kuskokwim Area*									
	Middle Fork Goodnews River	Met	Met	Met	Met	Met[b]	Met	Met	Met	Met
	Kanektok River	NS	NS	NS	NS	NS[b]	NS	NS	NS	NS
	Kogrukluk River	Met	Met	Under	Under	Over[a]	Over	Over	Met	Over
	Aniak River	Met	Met	Met	Met	Over[a]	Over	Over[g]	Met	Met
	Yukon River Summer Chum									
	East Fork Andreafsky River	Over	Under	Under	Under	Under	Met	Met	Under	Under
	Anvik River	Under	Met	Under	Under	Met[b]	Over	Met	Met	Under
	Mainstem Yukon River	Under	Over	Over	Over	Over	Over	Over	Over	Over
	Yukon River Fall Chum									
	Yukon River Drainage	Met	Met	Over	Met	Over	Over	Over	Met	Met
	Tanana River	Met	Over	Over	Met	Over	Over	Over	ND	Over
	Delta River	Met	Met	Over	Over	Over	Over	Over	Over	Met
	Toklat River	Under	Met	Met	Over	NA	NA	NA	NA	NA

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Table 7.–Page 2 of 3.

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Upper Yukon River Tributaries	Met	Under	Met	Met	Over	Over	Over	Met	NA
	Chandalar River	Met	Met	Over	Met	Over	Over	Over	Over	Met
	Sheenjek River	Met	Under	Under	Under	Over	Over	Met	Met	Met
	Fishing Branch River (Canada)	Under	Under	Under	Under	Over	Under	Under	Under	Under
	Yukon R. Mainstem (Canada)	Under	Met	Met	Met	Met	Met	Met	Met	Met
	Norton Sound									
	Subdistrict 1 Aggregate	Over	Met	Under	Met	Over	Over	Over	Met	Under
	Sinuk River	Over	Over	Under	Under	Met[f]	Met	Over	Under	Under
	Nome River	Under	Under	Under	Met	Over[f]	Over	Over	Under	Under
	Bonanza River	Over	Met	Under	Under	Over[f]	Under	Over	Under	Over
	Snake River	Met	Over	Met	Met	Over[f]	Over	Over	Under	Under
	Solomon River	Over	Over	Under	Met	Over[f]	Over	Over	Under	Under
	Flambeau River	Over	Over	Under	Over	Over[f]	Over	Over	Over	Under
	Eldorado River	Over	Over	Under	Under	Over[f]	Over	Over	Met	Under
	Niukluk River					Under	Under	Met	Under	Under
	Kwiniuk River	Met	Over	Met	Under	Met	Over	Over	Under	Under
	Tubutuluk River	NS	NS	Under	NS	Under	NS	Under	NS	Under
	Unalakleet/Old Woman River	NS	NS	NS	NS	Under[f]	NS	Under	NS	Over
	Kotzebue Sound									
	Kotzebue Sound Aggregate									
	Noatak and Eli Rivers	NS	NS	NS	Under	NS[f]	Under	NS[b]	Over	Met
	Upper Kobuk w/ Selby River	Met	NS	Met	Over	NS[f]	Over	NS[b]	Over	Over
	Salmon River	NS	NS	NS	NS	NS[f]	NS	NS[b]	NS	NS
	Tutuksuk River	NS	NS	NS	NS	Met[f]	NS	NS[b]	NS	NS
	Squirrel River	NS	NS	NS	NS	NS[f]	NS	NS[b]	NS	NS
Coho salmon	*Kuskokwim Area*									
	Middle Fork Goodnews River					Met	Met	Met	Met	Met
	Kogrukluk River	Under	Under	Met	Met	Met[a]	Met	Met	Over	Met
	Yukon River									
	Delta Clearwater River	Met	Met	Met	Met	Over[a]	Met	Met	Met	Met
	Norton Sound									
	Kwiniuk River	NS	NS	Met	Met	NS[f]	NS	Over	Over	NS
	Niukluk River	Met	Met	NS	Met	NS	NS	Met[h]	Over	Over
	North River (Unalakleet R.)	NS	Met	NS	Over	Over[f]	NS	Over	Over	Over
Pink salmon	*Norton Sound*									
	Nome River (odd year)					Met		Met		Met
	Nome River (even year)		Over		Over	[i]	Met		Met	
	Kwiniuk River	Under	Over	Over	Over	Met[i]	Met	Met	Met	Met
	Niukluk River	Over	Over	Over	Over	Met[i]	Met	Met	Met	Met
	North River	Over	Over	Over	Over	Met[i]	Met	Met	Met	Met
Sockeye salmon	*Kuskokwim Area*									
	North (Main) Fork Goodnews River	Met	Under	Met	Met	NS[a]	Over	NS	NS	NS
	Middle Fork Goodnews River	Under	Under	Met	Met	Over[a]	Over	Over[b]	Over	Met
	Kanektok River	Met	NS	Met	Met	Over[a]	Over	NS	NS	NS

-continued-

Table 7.–Page 3 of 3.

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Norton Sound									
	Salmon Lake/Grand Central River	Over	Under	Over	Over	Over[f]	Over	Over	Over	Under
	Glacial Lake	Over	Under	Met	Met	Over[f]	Over	Met	Under	Under

Note: NA = data not available, NS = no survey, ND = not determined yet. There are no escapement goals for pink salmon in Kuskokwim Area and Yukon River and there are no escapement goals for sockeye salmon in Yukon River.

[a] Escapement goal reevaluated, lower-bound goal changed to a range.

[b] Escapement goal reevaluated, goal value changed.

[c] Previous escapement goal was based on aerial surveys, replaced with escapement goal based on weir counts; see Molyneaux and Brannian (2006).

[d] Escapement goal reevaluated, goal range changed to a lower-bound goal.

[e] Escapement goal reevaluated, goal type changed but goal value remained the same.

[f] 2007 escapement goal based on DIDSON sonar counts, escapements in Table 4 are in DIDSON units, previous goals were based on Bendix and Biosonics sonar units; see Molyneaux and Brannian (2006).

[g] Prior to 2007 escapement goal was based on escapements enumerated by aerial survey, escapements in Table 4 are weir counts.

[h] Escapement goal reevaluated, point goal changed to a lower-bound goal.

Table 8.–Assessment of whether escapements met (Met), exceeded (Over), or did not meet (Under) the escapement goal in place at the time of enumeration for salmon stocks in Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas).

Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
Chinook salmon	*AK Peninsula*									
	Nelson River	Met	Over	Met	Over[a]	Over	Met	Met	Over	Under
	Chignik									
	Chignik River	Over	Over[a]	Over	Over	Over	Over	Met	Met	Met
	Kodiak									
	Karluk River	Under	Met	Met[a]	Over	Met	Under	Under	Under	Under
	Ayakulik River	Over	Over	Over[a]	Over	Met	Under	Met	Under	Under
Chum salmon	*AK Peninsula*									
	Northern District	Over	Over	Met	Met	Under	Over	Over[b]	Met	Met
	Northwestern District	Met	Met	Met	Over[a]	Met	Met	Over[b]	Over	Under
	Southeastern District	Over	Met	Over	Over	Over	Over	Met	Over	Met
	South Central District	Met	Met	Under	Over	Over	Met	Met	Met	Under
	Southwestern District	Over	Over	Met	Met	Over	Met	Over	Met	Over
	Unimak District	Under	Met	Under	Under[b]	Met	Met	Met[c]	Met	Met
	Chignik									
	Entire Chignik Area								Met[d]	Met
	Kodiak									
	Mainland District	Met	Met	Under	Met	Under[e]	Met	Under	Met[f]	Under
	Kodiak Archipelago Aggregate								Under[d]	Met
Coho salmon	*AK Peninsula*									
	Nelson River	Over	Over	Over	Met[c]	Met	Met	Met	Met	Met
	Thin Point Lake	Over	Over	Over	Met[c]	Met	Met	Met	Met	Under
	Kodiak									
	Pasagshak River	Over	Over	Over	Over	Over[a]	Under	Met	Over	Met
	Buskin River	Over	Over	Over	Over	Over[a]	Over	Over	Over	Over
	Olds River	Over	Met	Over	Over	Over[a]	Met	Under	Under	Under
	American River	Over	Over	Over	Over	Under[a]	Over	Under	Met	Met
Pink salmon	*AK Peninsula*									
	Bechevin Bay Section (odd year)	Over		Under	[e]	Met		Met		Met
	Bechevin Bay Section (even year)		Under		Met[e]		Met		Under	
	South Peninsula Total (odd year)				[d]	Over		Met[b]		Met
	South Peninsula Total (even year)				Over[d]		Met	[b]	Met	
	Chignik									
	Entire Chignik Area (odd year)					Over[d]		Met	[a]	Over
	Entire Chignik Area (even year)					[d]	Met		Over[a]	
	Kodiak									
	Mainland District	Met	Over	Over	Met	Met[g]	Over	Met	Under	Met
	Kodiak Archipelago					Met[d]	Over	Met	Met	Met
Sockeye salmon	*AK Peninsula*									
	Cinder River	Over	Met	Over	Over	Over	Over	Over[a]	Over	Over
	Ilnik River	Met	Met	Over	Over	Over	Over	Over	Met	Over

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Species	System	2001	2002	2003	2004	2005	2006	2007	2008	2009
	Meshik River	Over	Over	Over	Over	Over	Over	Met[a]	Over	Over
	Sandy River	Met	Met	Over	Under	Over	Met	Met[a]	Under	Met
	Bear River Early Run	Over	Over	Over	Over[a]	Over	Met	Met	Under	Met
	Bear River Late Run	Over	Over	Over	Under[a]	Over	Met	Over	Over	Met
	Nelson River	Over	Over	Over	Over[a]	Over	Met	Met	Met	Met
	Christianson Lagoon	Met	Met	Over	Over	Over	Met	Met	Over	Met
	Swanson Lagoon	Met	Met	Over	Over	Under	Under	Met[a]	Under	Under
	North Creek	Met	Over	Over	Over	Over	Met	Over	Over	Met
	Orzinski Lake	Over	Over	Over	Over	Over	Met	Under	Over	Over
	Mortensen Lagoon	Over	Met	Over	Over	Over	Over	Met	Met	Over
	Thin Point Lake	Over	Over	Over	Over	Met	Under	Met	Met	Over
	Chignik									
	Chignik River Early Run	Over	Met	Met	Met	Met[b]	Met	Met	Met	Met
	Chignik River Late Run	Over	Over	Over	Met	Met	Over	Over	Met[a]	Met
	Kodiak									
	Malina Creek	Over	Over	Met	Met	Met[a]	Met	Met	Met	Met
	Afognak (Litnik) River	Under	Under	Under	Under	Met[a]	Met	Met	Met	Met
	Little River	Under	Over	Over	Met	Eliminated			Under[h]	Under
	Uganik Lake	Under	Under	Met	Over	Eliminated			Met[h]	Met
	Karluk River Early Run	Over	Over	Over	Over	Over[a]	Met	Over	Under[a]	Under
	Karluk River Late Run	Met	Met	Over	Under	Over[a]	Met	Met	Under	Met
	Ayakulik River	Met	Met	Under	Met	Met[a]	Under	Met	Under	Met
	Upper Station River Early Run	Met	Under	Over	Over	Met[a]	Under	Met	Met	Met
	Upper Station River Late Run	Under	Met	Over	Met	Met[a]	Met	Met	Met	Met
	Frazer Lake	Under	Under	Over	Under	Met[a]	Met	Met	Met[a]	Met
	Saltery Lake	Over	Over	Over	Over	Met	Met	Met	Over	Over
	Pasagshak River	Met	Met	Over	Over	Over[a]	Met	Over	Over	Under
	Buskin Lake	Over	Over	Over	Over	Over	Over	Over	Under	Under

Note: NA = data not available. There are no coho salmon escapement goals in Chignik Area.

[a] Escapement goal reevaluated, goal range changed.

[b] Escapement goal reevaluated, goal type changed but goal range remained the same.

[c] Escapement goal reevaluated, upper bound eliminated, lower bound remained the same.

[d] Aggregate goal established to replace individual district level goals.

[e] Escapement goal reevaluated, goal range changed to a lower-bound goal.

[f] Escapement goal reevaluated, lower-bound goal changed.

[g] Separate odd and even year goals were discontinued and a single goal established.

[h] Previous escapement goal reestablished.

Table 9.–Southeast Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2001 to 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON									
Number Below	1	1	2	0	1	1	4	3	5
Number Met	5	5	5	7	7	7	6	7	5
Number Above	5	5	4	4	3	3	1	1	1
% Below	9	9	18	0	9	9	36	27	45
% Met	45	45	45	64	64	64	55	64	45
% Above	45	45	36	36	27	27	9	9	9
CHUM SALMON									
Number Below									5
Number Met									2
Number Above									1
% Below									63
% Met									25
% Above									13
COHO SALMON									
Number Below	0	0	0	0	2	0	3	0	0
Number Met	5	2	4	6	6	8	7	5	10
Number Above	5	8	6	3	2	5	3	6	3
% Below	0	0	0	0	20	0	23	0	0
% Met	50	20	40	67	60	62	54	45	77
% Above	50	80	60	33	20	38	23	55	23
PINK SALMON									
Number Below	0	0	0	1	0	1	1	1	0
Number Met	1	1	1	1	1	1	0	2	4
Number Above	1	1	3	2	3	2	3	1	0
% Below	0	0	0	25	0	25	25	25	0
% Met	50	50	25	25	25	25	0	50	100
% Above	50	50	75	50	75	50	75	25	0
SOCKEYE SALMON									
Number Below	4	4	0	1	2	2	4	12	5
Number Met	5	5	2	6	6	4	5	1	4
Number Above	3	3	11	6	5	7	4	0	3
% Below	33	33	0	8	15	15	31	92	42
% Met	42	42	15	46	46	31	38	8	33
% Above	25	25	85	46	38	54	31	0	25

Note: Blank cells indicate that there were no official escapement goals for that species in those particular years.

Table 10.–Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2001 to 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON									
Number Below	2	5	4	2	2	2	7	12	15
Number Met	5	15	9	9	16	17	18	12	12
Number Above	19	8	11	16	6	5	2	2	1
% Below	8	18	17	7	8	8	26	46	54
% Met	19	54	38	33	67	71	67	46	43
% Above	73	29	46	59	25	21	7	8	4
CHUM SALMON									
Number Below	6	2	0	1	2	1	4	2	2
Number Met	5	7	7	8	6	10	12	14	13
Number Above	7	9	11	9	9	6	2	3	4
% Below	33	11	0	6	12	6	22	11	11
% Met	28	39	39	44	35	59	67	74	68
% Above	39	50	61	50	53	35	11	16	21
COHO SALMON									
Number Below	0	0	0	0	0	0	0	0	1
Number Met	2	0	2	1	1	0	2	1	2
Number Above	2	4	2	3	3	3	2	3	1
% Below	0	0	0	0	0	0	0	0	25
% Met	50	0	50	25	25	0	50	25	50
% Above	50	100	50	75	75	100	50	75	25
PINK SALMON									
Number Below	8	0	0	1	0	1	1	1	4
Number Met	3	9	8	12	4	8	8	9	4
Number Above	9	11	13	8	18	13	9	8	10
% Below	40	0	0	5	0	5	6	6	22
% Met	15	45	38	57	18	36	44	50	22
% Above	45	55	62	38	82	59	50	44	56
SOCKEYE SALMON									
Number Below	8	4	2	4	4	2	2	5	5
Number Met	6	13	13	13	12	10	13	18	14
Number Above	15	12	14	12	13	17	14	7	11
% Below	28	14	7	14	14	7	7	17	17
% Met	21	45	45	45	41	34	45	60	47
% Above	52	41	48	41	45	59	48	23	37

Table 11.–Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon escapements compared to escapement goals for the years 2001 to 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON									
Number Below	9	9	6	5	5	4	2	14	6
Number Met	10	10	10	14	7	8	12	7	10
Number Above	2	2	4	4	10	9	8	1	4
% Below	43	43	30	22	23	19	9	64	30
% Met	48	48	50	61	32	38	55	32	50
% Above	10	10	20	17	45	43	36	5	20
SUMMER CHUM SALMON									
Number Below	1	1	9	6	3	3	2	7	10
Number Met	6	5	5	6	4	2	2	5	3
Number Above	6	6	0	2	9	10	11	3	4
% Below	8	8	64	43	19	20	13	47	59
% Met	46	42	36	43	25	13	13	33	18
% Above	46	50	0	14	56	67	73	20	24
YUKON RIVER SUMMER CHUM SALMON									
Number Below	2	1	2	2	1	0	0	1	2
Number Met	0	1	0	0	1	1	2	1	0
Number Above	1	1	1	1	1	2	1	1	1
% Below	67	33	67	67	33	0	0	33	67
% Met	0	33	0	0	33	33	67	33	0
% Above	33	33	33	33	33	67	33	33	33
YUKON RIVER FALL CHUM SALMON									
Number Below	3	3	2	2	0	1	1	1	1
Number Met	6	5	3	5	1	1	2	4	5
Number Above	0	1	4	2	7	6	5	2	1
% Below	33	33	22	22	0	13	13	14	14
% Met	67	56	33	56	13	13	25	57	71
% Above	0	11	44	22	88	75	63	29	14
COHO SALMON									
Number Below	1	1	0	0	0	0	0	0	0
Number Met	2	3	3	4	2	3	4	2	3
Number Above	0	0	0	1	2	0	2	4	2
% Below	33	25	0	0	0	0	0	0	0
% Met	67	75	100	80	50	100	67	33	60
% Above	0	0	0	20	50	0	33	67	40

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	2001	2002	2003	2004	2005	2006	2007	2008	2009
PINK SALMON									
Number Below	1	0	0	0	0	0	0	0	0
Number Met	0	0	0	0	4	4	4	4	4
Number Above	2	4	3	4	0	0	0	0	0
% Below	33	0	0	0	0	0	0	0	0
% Met	0	0	0	0	100	100	100	100	100
% Above	67	100	100	100	0	0	0	0	0
SOCKEYE SALMON									
Number Below	1	4	0	0	0	0	0	1	2
Number Met	2	0	4	4	0	0	1	0	1
Number Above	2	0	1	1	4	5	2	2	0
% Below	20	100	0	0	0	0	0	33	67
% Met	40	0	80	80	0	0	33	0	33
% Above	40	0	20	20	100	100	67	67	0

Table 12.–Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) escapements for Chinook, chum, coho, pink, and sockeye salmon compared to escapement goals for the years 2001 to 2009.

	2001	2002	2003	2004	2005	2006	2007	2008	2009
CHINOOK SALMON									
Number Below	1	0	0	0	0	2	1	2	3
Number Met	1	1	2	0	2	1	3	1	1
Number Above	2	3	2	4	2	1	0	1	0
% Below	25	0	0	0	0	50	25	50	75
% Met	25	25	50	0	50	25	75	25	25
% Above	50	75	50	100	50	25	0	25	0
CHUM SALMON									
Number Below	1	0	3	1	2	0	1	1	3
Number Met	3	5	3	3	2	5	3	6	5
Number Above	3	2	1	3	3	2	3	2	1
% Below	14	0	43	14	29	0	14	11	33
% Met	43	71	43	43	29	71	43	67	56
% Above	43	29	14	43	43	29	43	22	11
COHO SALMON									
Number Below	0	0	0	0	1	1	2	1	2
Number Met	0	1	0	2	2	3	3	3	3
Number Above	6	5	6	4	3	2	1	2	1
% Below	0	0	0	0	17	17	33	17	33
% Met	0	17	0	33	33	50	50	50	50
% Above	100	83	100	67	50	33	17	33	17
PINK SALMON									
Number Below	0	1	1	0	0	0	0	2	0
Number Met	1	0	0	2	3	3	5	2	4
Number Above	1	1	1	1	2	2	0	1	1
% Below	0	50	50	0	0	0	0	40	0
% Met	50	0	0	67	60	60	100	40	80
% Above	50	50	50	33	40	40	0	20	20
SOCKEYE SALMON									
Number Below	5	4	2	5	1	4	1	8	5
Number Met	9	11	3	6	10	16	17	12	16
Number Above	14	13	23	17	15	6	8	8	7
% Below	18	14	7	18	4	15	4	29	18
% Met	32	39	11	21	38	62	65	43	57
% Above	50	46	82	61	58	23	31	29	25

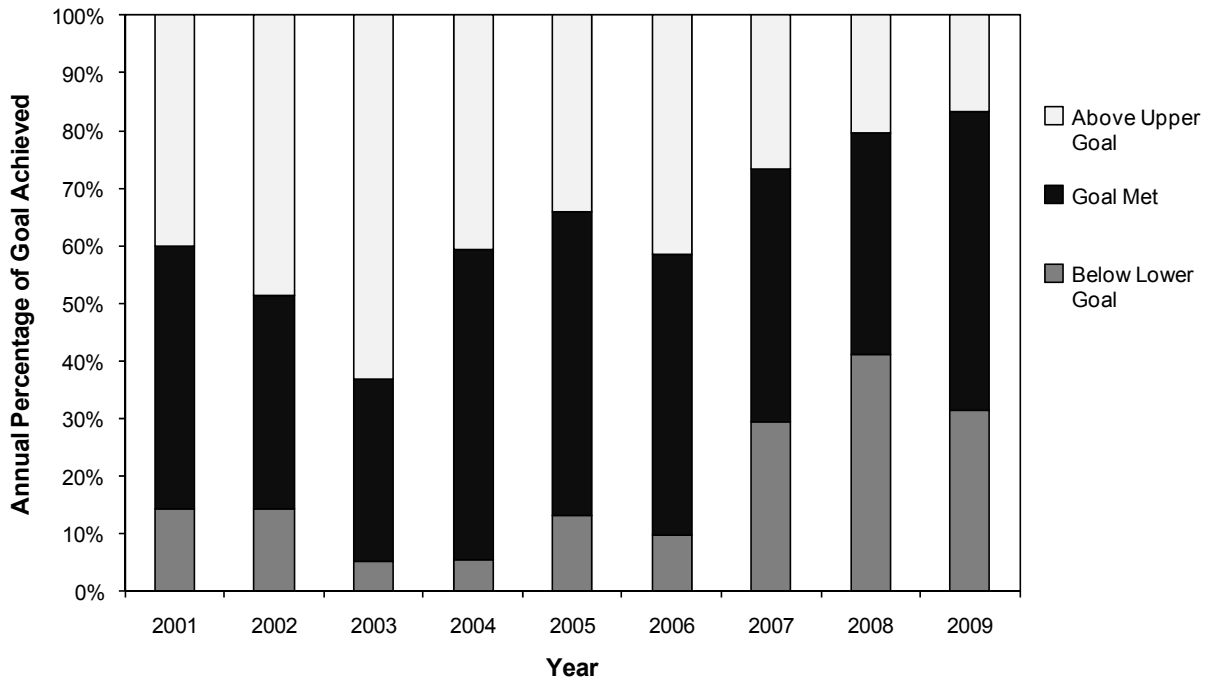

Figure 6.–Southeast Region salmon escapements compared against escapement goals for the years 2001 to 2009.

Table 13.–Summary of Southeast Region salmon escapements compared against escapement goals for the years 2001 to 2009.

Southeast Region	2001	2002	2003	2004	2005	2006	2007	2008	2009
Stocks with Escapement Data	35	35	38	37	38	41	41	39	48
Below Lower Goal									
Number	5	5	2	2	5	4	12	16	15
Percent	14%	14%	5%	5%	13%	10%	29%	41%	31%
Goal Met									
Number	16	13	12	20	20	20	18	15	25
Percent	46%	37%	32%	54%	53%	49%	44%	38%	52%
Above Upper Goal									
Number	14	17	24	15	13	17	11	8	8
Percent	40%	49%	63%	41%	34%	41%	27%	21%	17%

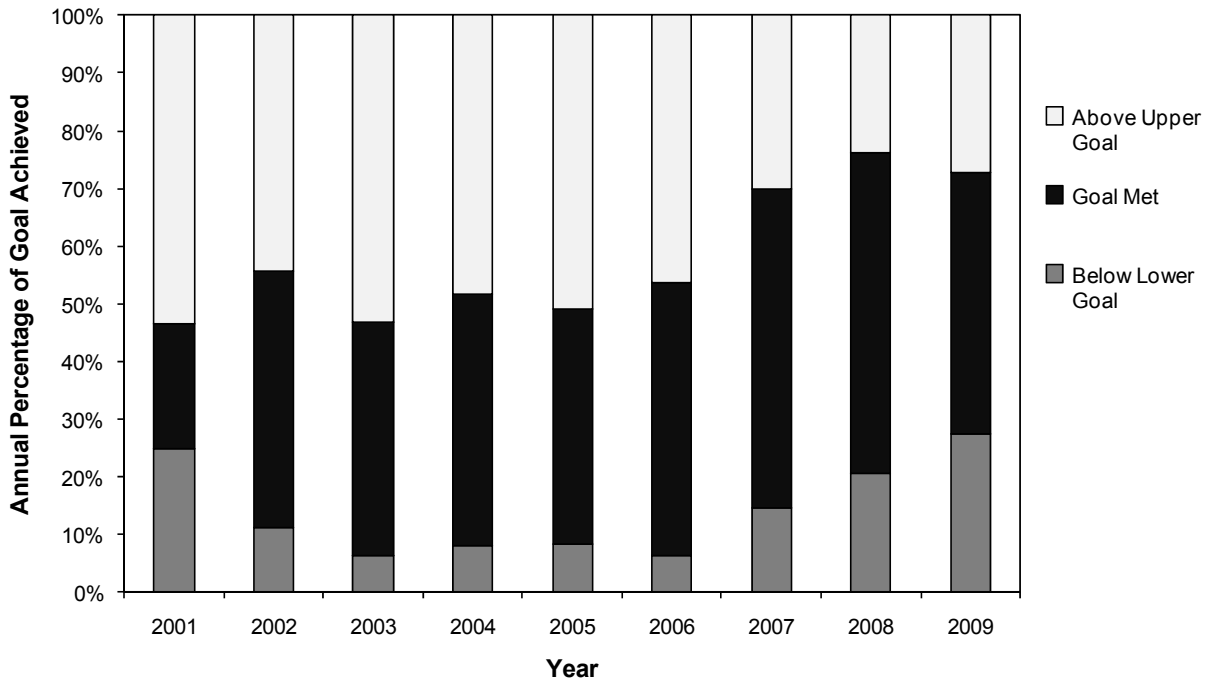

Figure 7.–Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2001 to 2009.

Table 14.–Summary of Central Region (Bristol Bay, Cook Inlet, Prince William Sound/Copper River) salmon escapements compared against escapement goals for the years 2001 to 2009.

Central Region	2001	2002	2003	2004	2005	2006	2007	2008	2009
Stocks with Escapement Data	97	99	96	99	96	95	96	97	99
Below Lower Goal									
Number	24	11	6	8	8	6	14	20	27
Percent	25%	11%	6%	8%	8%	6%	15%	21%	27%
Goal Met									
Number	21	44	39	43	39	45	53	54	45
Percent	22%	44%	41%	43%	41%	47%	55%	56%	45%
Above Upper Goal									
Number	52	44	51	48	49	44	29	23	27
Percent	54%	44%	53%	48%	51%	46%	30%	24%	27%

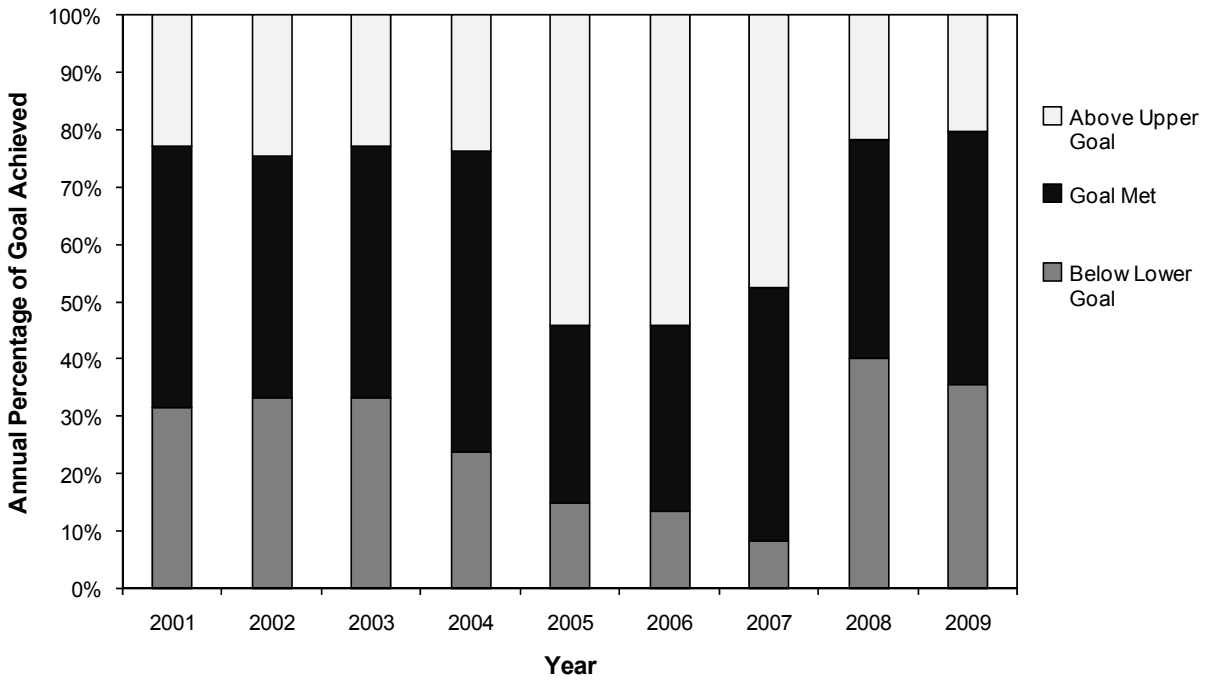

Figure 8.–Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2001 to 2009.

Table 15.–Summary of Arctic-Yukon-Kuskokwim Region salmon escapements compared against escapement goals for the years 2001 to 2009.

AYK Region	2001	2002	2003	2004	2005	2006	2007	2008	2009
Stocks with Escapement Data	57	57	57	63	61	59	61	60	59
Below Lower Goal									
Number	18	19	19	15	9	8	5	24	21
Percent	32%	33%	33%	24%	15%	14%	8%	40%	36%
Goal Met									
Number	26	24	25	33	19	19	27	23	26
Percent	46%	42%	44%	52%	31%	32%	44%	38%	44%
Above Upper Goal									
Number	13	14	13	15	33	32	29	13	12
Percent	23%	25%	23%	24%	54%	54%	48%	22%	20%

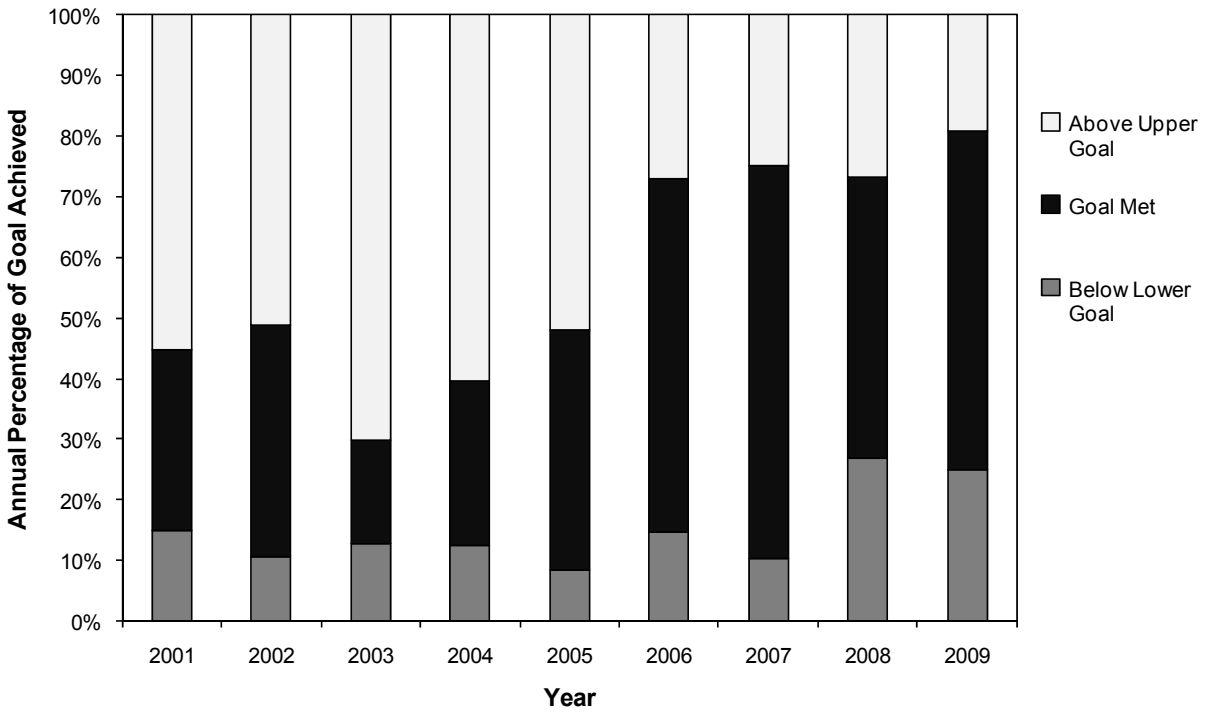

Figure 9.–Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2001 to 2009.

Table 16.–Summary of Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) salmon escapements compared against escapement goals for the years 2001 to 2009.

Westward Region		2001	2002	2003	2004	2005	2006	2007	2008	2009
Stocks with Escapement Data		47	47	47	48	48	48	48	52	52
Below Lower Goal										
	Number	7	5	6	6	4	7	5	14	13
	Percent	15%	11%	13%	13%	8%	15%	10%	27%	25%
Goal Met										
	Number	14	18	8	13	19	28	31	24	29
	Percent	30%	38%	17%	27%	40%	58%	65%	46%	56%
Above Upper Goal										
	Number	26	24	33	29	25	13	12	14	10
	Percent	55%	51%	70%	60%	52%	27%	25%	27%	19%

Table 17.–Statewide summary of salmon stocks of concern in Alaska.

Region	System	Species	Level of Concern
Southeast	McDonald Lake	Sockeye	Management
Central	Kvichak River	Sockeye	Yield[a]
	Yentna River	Sockeye	Yield
Arctic-Yukon-Kuskokwim	Yukon River	Chinook	Yield
	Norton Sound Sub-district 5 & 6	Chinook	Yield
	Norton Sound Sub-district 1, 2, & 3	Chum	Yield

[a] Kvichak River sockeye was changed from a stock of management concern to a stock of yield concern at the December 2009 Alaska Board of Fisheries meeting.

Table 18.–Methods used to enumerate and develop escapement goals for Southeast Region Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration Method	Goal Development Method
CHINOOK SALMON		
Blossom River	Aerial Survey	SRA[a]
Keta River	Aerial Survey	SRA
Unuk River	Mark-Recapture	SRA
Chickamin River	Aerial Survey	SRA
Andrew Creek	Aerial Survey	SRA
Stikine River	Mark-Recapture	SRA
King Salmon River	Aerial Survey	SRA
Taku River	Mark-Recapture	SRA
Chilkat River	Mark-Recapture	Theoretical SRA
Klukshu (Alsek) River	Weir Count	SRA
Situk River	Weir Count	SRA
CHUM SALMON		
Southern Southeast Summer	Aerial Survey	Percentile
Northern Southeast Inside Summer	Aerial Survey	Percentile
Northern Southeast Outside Summer	Aerial Survey	Percentile
Cholmondeley Sound Fall	Aerial Survey	Percentile
Port Camden Fall	Aerial Survey	Risk Analysis
Security Bay Fall	Aerial Survey	Percentile
Excursion River Fall	Aerial Survey	Percentile
Chilkat River Fall	Mark-Recapture, Fish Wheel	SRA
COHO SALMON		
Hugh Smith Lake	Weir Count	SRA
Taku River	Mark-Recapture	Agreement, SRA
Auke Creek	Weir Count	SRA
Montana Creek	Foot Survey	Theoretical SRA
Peterson Creek	Foot Survey	Theoretical SRA
Ketchikan Survey Index	Aerial Survey	Theoretical SRA
Sitka Survey Index	Foot Survey	Theoretical SRA
Ford Arm Lake	Weir Count	SRA
Berners River	Mark-Recapture	SRA
Chilkat River	Mark-Recapture, Foot Survey	SRA
Lost River	Foot Survey	SRA
Situk River	Aerial Survey	SRA
Tsiu/Tsivat Rivers	Aerial Survey	SRA
PINK SALMON		
Southern Southeast	Aerial Survey	Yield Analysis
Northern Southeast Inside	Aerial Survey	Yield Analysis
Northern Southeast Outside	Aerial Survey	Yield Analysis
Situk River (even-year)	Weir Count	SRA
Situk River (odd-year)	Weir Count	SRA

-continued-

Table 18.–Page 2 of 2.

System	Enumeration Method	Goal Development Method
SOCKEYE SALMON		
Hugh Smith Lake	Weir Count	Risk Analysis, Theoretical SRA
McDonald Lake	Expanded Foot Survey	SRA
Mainstem Stikine River	Mark-Recapture	Professional Judgement (Transboundary Technical Committee, Pacific Salmon Commission)
Tahltan Lake	Weir Count	SRA
Speel Lake	Weir Count	SRA
Taku River	Mark-Recapture	Professional Judgement (Transboundary Technical Committee, Pacific Salmon Commission)
Redoubt Lake	Weir Count	SRA
Chilkat Lake	Sonar, Mark-Recapture	SRA
Chilkoot Lake	Weir Count	SRA
East Alsek-Doame River	Aerial Survey	SRA
Klukshu River	Weir Count	SRA
Lost River	Foot/Boat Survey	Percentile
Situk River	Weir Count	SRA

[a] SRA = Spawner-recruit analysis.

Table 19.–Methods used to enumerate and develop escapement goals for Central Region (Bristol Bay, Cook Inlet, and Prince William Sound/Copper River) Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration Method	Goal Development Method
CHINOOK SALMON		
Bristol Bay		
Nushagak River	Sonar	SRA[a], Yield Analysis
Togiak River	Aerial Survey	Risk Analysis
Naknek River	Aerial Survey	Risk Analysis
Alagnak River	Aerial Survey	Risk Analysis
Egegik River	Aerial Survey	Risk Analysis
Upper Cook Inlet		
Alexander Creek	Single Aerial Survey	Percentile
Campbell Creek	Single Foot Survey	Percentile
Chuitna River	Single Aerial Survey	Percentile
Chulitna River	Single Aerial Survey	Percentile
Clear (Chunilna) Creek	Single Aerial Survey	Percentile
Crooked Creek	Weir Count	Percentile
Deshka River	Weir Count	SRA
Goose Creek	Single Aerial Survey	Percentile
Kenai River - Early Run	Sonar	SRA
Kenai River - Late Run	Sonar	SRA
Lake Creek	Single Aerial Survey	Percentile
Lewis River	Single Aerial Survey	Percentile
Little Susitna River	Single Aerial Survey	Percentile
Little Willow Creek	Single Aerial Survey	Percentile
Montana Creek	Single Aerial Survey	Percentile
Peters Creek	Single Aerial Survey	Percentile
Prairie Creek	Single Aerial Survey	Percentile
Sheep Creek	Single Aerial Survey	Percentile
Talachulitna River	Single Aerial Survey	Percentile
Theodore River	Single Aerial Survey	Percentile
Willow Creek	Single Aerial Survey	Percentile
Lower Cook Inlet		
Anchor River	Sonar, Weir Count	SRA
Deep Creek	Single Aerial Survey	Percentile
Ninilchik River	Weir Count	Percentile
Prince William Sound		
Copper River	Mark-Recapture	Empirical Observation
CHUM SALMON		
Bristol Bay		
Nushagak River	Sonar	Risk Analysis
Upper Cook Inlet		
Clearwater Creek	Peak Aerial Survey	Percentile
Lower Cook Inlet		
Port Graham River	Multiple Foot Surveys	Percentile
Dogfish Lagoon	Multiple Foot Surveys	Percentile
Rocky River	Multiple Foot Surveys	Percentile

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Table 19.–Page 2 of 4.

System	Enumeration Method	Goal Development Method
Port Dick Creek	Multiple Aerial or Foot Surveys	Percentile
Island Creek	Multiple Aerial or Foot Surveys	Percentile
Big Kamishak River	Multiple Aerial Surveys	Percentile
Little Kamishak River	Multiple Aerial Surveys	Percentile
McNeil River	Multiple Aerial Surveys	Percentile
Bruin River	Multiple Aerial Surveys	Percentile
Ursus Cove	Multiple Aerial Surveys	Percentile
Cottonwood Creek	Multiple Aerial Surveys	Percentile
Iniskin Bay	Multiple Aerial Surveys	Percentile
Prince William Sound		
Eastern District	Multiple Aerial Surveys	Risk Analysis
Northern District	Multiple Aerial Surveys	Risk Analysis
Coghill District	Multiple Aerial Surveys	Risk Analysis
Northwestern District	Multiple Aerial Surveys	Risk Analysis
Southeastern District	Multiple Aerial Surveys	Risk Analysis
COHO SALMON		
Bristol Bay		
There are no coho salmon stocks with escapement goals in Bristol Bay		
Upper Cook Inlet		
Jim Creek	Single Foot Survey	Percentile
Little Susitna River	Weir Count	Percentile
Lower Cook Inlet		
There are no coho salmon stocks with escapement goals in Lower Cook Inlet		
Prince William Sound		
Copper River Delta	Peak Aerial Survey	Percentile
Bering River	Peak Aerial Survey	Percentile
PINK SALMON		
Bristol Bay		
There are no pink salmon stocks with escapement goals in Bristol Bay		
Upper Cook Inlet		
There are no pink salmon stocks with escapement goals in Upper Cook Inlet		
Lower Cook Inlet		
Humpy Creek	Multiple Foot Surveys	Percentile
China Poot Creek	Multiple Foot Surveys	Percentile
Tutka Creek	Multiple Foot Surveys	Percentile
Barabara Creek	Multiple Foot Surveys	Percentile
Seldovia Creek	Multiple Foot Surveys	Percentile
Port Graham River	Multiple Foot Surveys	Percentile
Port Chatham	Multiple Foot Surveys	Percentile
Windy Creek Right	Multiple Foot Surveys	Percentile
Windy Creek Left	Multiple Foot Surveys	Percentile
Rocky River	Multiple Foot Surveys	Percentile
Port Dick Creek	Multiple Aerial or Foot Surveys	Percentile
Island Creek	Multiple Aerial or Foot Surveys	Percentile

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Table 19.–Page 3 of 4.

System	Enumeration Method	Goal Development Method
S. Nuka Island Creek	Multiple Aerial or Foot Surveys	Percentile
Desire Lake Creek	Multiple Aerial Surveys	Percentile
Bear & Salmon Creeks	Multiple Foot Surveys	Percentile
Thumb Cove	Multiple Foot Surveys	Percentile
Humpy Cove	Multiple Foot Surveys	Percentile
Tonsina Creek	Multiple Foot Surveys	Percentile
Bruin River	Multiple Aerial Surveys	Percentile
Sunday Creek	Multiple Aerial Surveys	Percentile
Brown's Peak Creek	Multiple Aerial Surveys	Percentile
Prince William Sound		
All Districts Combined (even year)	Multiple Aerial Surveys	Yield Analysis
All Districts Combined (odd year)	Multiple Aerial Surveys	Yield Analysis
SOCKEYE SALMON		
Bristol Bay		
Kvichak River (off-peak)	Tower Count	SRA, Yield Analysis
Alagnak River	Tower Count	Risk Analysis
Naknek River	Tower Count	SRA, Yield Analysis
Egegik River	Tower Count	SRA, Yield Analysis
Ugashik River	Tower Count	SRA, Yield Analysis
Wood River	Tower Count	SRA, Yield Analysis
Igushik River	Tower Count	SRA, Yield Analysis
Nushagak River	Sonar	SRA, Yield Analysis
Togiak River	Tower Count	SRA, Yield Analysis
Upper Cook Inlet		
Crescent River	Sonar	SRA
Fish Creek (Knik)	Weir Count	Percentile
Kasilof River	Sonar	SRA
Kenai River	Sonar	Brood Interaction Simulation Model
Packers Creek	Weir Count	Percentile
Russian River - Early Run	Weir Count	Percentile
Russian River - Late Run	Weir Count	Percentile
Yentna River	Sonar	Percentile
Chelatna Lake	Weir Count	Percentile
Judd Lake	Weir Count	Percentile
Larson Lake	Weir Count	Percentile
Lower Cook Inlet		
English Bay	Peak Aerial Survey, Weir Count	Percentile
Delight Lake	Peak Aerial Survey, Weir Count	Percentile
Desire Lake	Peak Aerial Survey, Weir Count	Percentile
Bear Lake	Weir Count	Percentile
Aialik Lake	Peak Aerial Survey	Percentile
Mikfik Lake	Peak Aerial Survey	Percentile
Chenik Lake	Peak Aerial Survey, Weir Count	Percentile
Amakdedori Creek	Peak Aerial Survey	Percentile

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Table 19.–Page 4 of 4.

System	Enumeration Method	Goal Development Method
Prince William Sound		
Upper Copper River	Sonar	SRA
Copper River Delta	Peak Aerial Survey	SRA
Bering River	Peak Aerial Survey	Percentile
Coghill Lake	Weir Count	Percentile
Eshamy Lake	Weir Count	SRA

[a] SRA = Spawner-recruit analysis.

Table 20.–Methods used to enumerate and develop escapement goals for Arctic-Yukon-Kuskokwim Region Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration Method	Goal Development Method
CHINOOK SALMON		
Kuskokwim Area		
North (Main) Fork Goodnews River	Peak Aerial Survey	Percentile
Middle Fork Goodnews River	Weir Count	SRA[a]
Kanektok River	Peak Aerial Survey	Percentile
Kogrukluk River	Weir Count	Percentile
Kwethluk River	Weir Count	Percentile
Tuluksak River	Weir Count	Percentile
George River	Weir Count	Percentile
Kisaralik River	Peak Aerial Survey	Percentile
Aniak River	Peak Aerial Survey	Percentile
Salmon River (Aniak R)	Peak Aerial Survey	Percentile
Holitna River	Peak Aerial Survey	Percentile
Cheeneetnuk River (Stony R)	Peak Aerial Survey	Percentile
Gagaryah River (Stony R)	Peak Aerial Survey	Percentile
Salmon River (Pitka Fork)	Peak Aerial Survey	Percentile
Yukon River		
East Fork Andreafsky River	Peak Aerial Survey	Percentile
West Fork Andreafsky River	Peak Aerial Survey	Percentile
Anvik River	Peak Aerial Survey	Percentile
Nulato River	Aerial Survey	Percentile
Gisasa River	Aerial Survey	Percentile
Chena River	Tower, Mark-Recapture	SRA
Salcha River	Tower, Mark-Recapture	SRA
Canada Mainstem	Sonar	Agreement
Norton Sound		
Fish River/Boston Creek	Aerial Survey	Percentile
Kwiniuk River	Tower Count	SRA
North River (Unalakleet R)	Tower Count	Percentile
Shaktoolik River	Unexpanded Aerial Survey	Theoretical SRA
Unalakleet/Old Woman River	Unexpanded Aerial Survey	Theoretical SRA
CHUM SALMON		
Kuskokwim Area		
Middle Fork Goodnews River	Weir Count	Percentile
Kanektok River	Aerial Survey	Percentile
Kogrukluk River	Weir Count	Percentile
Aniak River	Sonar	Percentile
Yukon River Summer Chum		
East Fork Andreafsky River	Weir Count	SRA
Anvik River	Sonar	SRA
Mainstem Yukon River	NA	NA
Yukon River Fall Chum		
Yukon River Drainage	Calculated - Multiple Surveys	SRA
Tanana River	Mark-Recapture	SRA
Delta River	Multiple Foot Surveys	Proportion of Tanana River Goal

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Table 20.–Page 2 of 3.

System	Enumeration Method	Goal Development Method
Toklat River	Foot Survey	Proportion of Tanana River Goal
Upper Yukon River Tributaries	Sonar & Weir Count	SRA
Chandalar River	Sonar	Proportion of Upper Yukon River Tributaries Goal
Sheenjek River	Sonar	Proportion of Upper Yukon River Tributaries Goal
Fishing Branch River (Canada)	Weir Count	Agreement (U.S./Canada Joint Technical Committee)
Yukon R. Mainstem (Canada)	Mark-Recapture	Agreement (U.S./Canada Joint Technical Committee)
Norton Sound		
Subdistrict 1 Aggregate	Calculated - Multiple Surveys	SRA
Sinuk River	Expanded Aerial Survey	Proportion of Aggregate Goal
Nome River	Weir Count	Proportion of Aggregate Goal
Bonanza River	Expanded Aerial Survey	Proportion of Aggregate Goal
Snake River	Tower/Weir Count	Proportion of Aggregate Goal
Solomon River	Expanded Aerial Survey	Proportion of Aggregate Goal
Flambeau River	Expanded Aerial Survey	Proportion of Aggregate Goal
Eldorado River	Expanded Aerial Survey	Proportion of Aggregate Goal
Niukluk River	Tower Count	Percentile
Kwiniuk River	Tower Count	SRA
Tubutuluk River	Expanded Aerial Survey	SRA
Unalakleet/Old Woman River	Aerial Survey	Empirical Observation
Kotzebue Sound		
Kotzebue Sound Aggregate	Expanded Aerial Survey	SRA
Noatak and Eli Rivers	Aerial Survey	Proportion of Aggregate Goal
Upper Kobuk w/ Selby River	Aerial Survey	Proportion of Aggregate Goal
Salmon River	Aerial Survey	Proportion of Aggregate Goal
Tutuksuk River	Aerial Survey	Proportion of Aggregate Goal
Squirrel River	Aerial Survey	Proportion of Aggregate Goal
COHO SALMON		
Kuskokwim Area		
Middle Fork Goodnews River	Weir Count	Percentile
Kogrukluk River	Weir Count	Percentile
Yukon River		
Delta Clearwater River	Boat Survey	Percentile
Norton Sound		
Kwiniuk River	Aerial Survey	Theoretical SRA
Niukluk River	Tower Count	Percentile
North River (Unalakleet R.)	Aerial Survey	Theoretical SRA
PINK SALMON		
Kuskokwim Area		
There are no escapement goals for pink salmon in the Kuskokwim Management Area.		
Yukon River		
There are no escapement goals for pink salmon in the Yukon River drainage.		

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Table 20.–Page 3 of 3.

System	Enumeration Method	Goal Development Method
Norton Sound		
Nome River (odd year)	Weir Count	Empirical Observation
Nome River (even year)	Weir Count	Empirical Observation
Kwiniuk River	Tower Count	Empirical Observation
Niukluk River	Tower Count	Empirical Observation
North River	Tower Count	Empirical Observation
SOCKEYE SALMON		
Kuskokwim Area		
North (Main) Fork Goodnews River	Aerial Survey	Percentile
Middle Fork Goodnews River	Weir Count	SRA
Kanektok River	Aerial Survey	Percentile
Yukon River		
There are no escapement goals for Sockeye in the Yukon River drainage.		
Norton Sound		
Salmon Lake/Grand Central River	Aerial Survey	Empirical Observation
Glacial Lake	Aerial Survey	Empirical Observation

Note: NA = data not available

[a] SRA = Spawner-recruit analysis.

Table 21.–Methods used to enumerate and develop escapement goals for Westward Region (Alaska Peninsula/Aleutian Islands, Kodiak, and Chignik areas) Chinook, chum, coho, pink, and sockeye salmon stocks.

System	Enumeration Method	Goal Development Method
CHINOOK SALMON		
AK Peninsula		
Nelson River	Weir, Tower Count	SRA[a], Spawning Habitat Model
Chignik		
Chignik River	Weir Count	SRA
Kodiak		
Karluk River	Weir Count	SRA
Ayakulik River	Weir Count	SRA
CHUM SALMON		
AK Peninsula		
Northern District	Peak Aerial Survey	SRA
Northwestern District	Peak Aerial Survey	SRA
Southeastern District	Peak Aerial Survey	Percentile
South Central District	Peak Aerial Survey	Percentile
Southwestern District	Peak Aerial Survey	Percentile
Unimak District	Peak Aerial Survey	Risk Analysis
Chignik		
Entire Chignik Area	Peak Aerial Survey	Risk Analysis
Kodiak		
Mainland District	Peak Aerial Survey	Percentile, Risk Analysis
Kodiak Archipelago Aggregate	Peak Aerial Survey	Percentile
COHO SALMON		
AK Peninsula		
Nelson River	Peak Aerial Survey	Risk Analysis
Thin Point Lake	Peak Aerial Survey	Spawning Habitat Model
Chignik		
There are no coho salmon stocks with escapement goals in Chignik Area		
Kodiak		
Pasagshak River	Foot Survey	Theoretical SRA
Buskin River	Weir Count	SRA
Olds River	Foot Survey	Theoretical SRA
American River	Foot Survey	Theoretical SRA
PINK SALMON		
AK Peninsula		
Bechevin Bay Section (odd year)	Peak Aerial Survey	Risk Analysis
Bechevin Bay Section (even year)	Peak Aerial Survey	Risk Analysis
South Peninsula Total (odd year)	Peak Aerial Survey	SRA
South Peninsula Total (even year)	Peak Aerial Survey	SRA
Chignik		
Entire Chignik Area (odd year)	Peak Aerial Survey	Yield Analysis
Entire Chignik Area (even year)	Peak Aerial Survey	Yield Analysis

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Table 21.–Page 2 of 2.

System	Enumeration Method	Goal Development Method
Kodiak		
Mainland District	Peak Aerial Survey	Conditional Sustained Yield Analysis
Kodiak Archipelago	Peak Aerial Survey	Conditional Sustained Yield Analysis
SOCKEYE SALMON		
AK Peninsula		
Cinder River	Peak Aerial Survey	Percentile
Ilnik River	Weir Count	Percentile, Euphotic Volume Model, Zooplankton Model
Meshik River	Peak Aerial Survey	Percentile
Sandy River	Weir Count	Percentile
Bear River Early Run	Weir Count	Spawning Habitat Model, Percentile, Euphotic Volume Model, Zooplankton Model, Lake Surface Area
Bear River Late Run	Weir Count	Spawning Habitat Model, Percentile, Euphotic Volume Model, Zooplankton Model, Lake Surface Area
Nelson River	Weir Count	SRA
Christianson Lagoon	Peak Aerial Survey	Spawning Habitat Model
Swanson Lagoon	Peak Aerial Survey	Percentile
North Creek	Peak Aerial Survey	Percentile
Orzinski Lake	Weir Count	Percentile
Mortensen Lagoon	Peak Aerial Survey	Spawning Habitat Model, Percentile, Euphotic Volume Model, Zooplankton Model, Lake Surface Area
Thin Point Lake	Peak Aerial Survey	Spawning Habitat Model, Percentile, Euphotic Volume Model, Zooplankton Model, Lake Surface Area
Chignik		
Chignik River Early Run	Weir Count	Yield Analysis, Euphotic Volume Model, Zooplankton Model
Chignik River Late Run	Weir Count	SRA, Euphotic Volume Model, Zooplankton Model
Kodiak		
Malina Creek	Peak Aerial Survey	Percentile, Zooplankton Model
Afognak (Litnik) River	Weir Count	SRA
Little River	Peak Aerial Survey	Risk Analysis
Uganik Lake	Peak Aerial Survey	Percentile
Karluk River Early Run	Weir Count	SRA
Karluk River Late Run	Weir Count	SRA
Ayakulik River	Weir Count	SRA, Yield Analysis
Upper Station River Early Run	Weir Count	Percentile
Upper Station River Late Run	Weir Count	SRA
Frazer Lake	Weir Count	SRA
Saltery Lake	Weir Count	SRA
Pasagshak River	Peak Aerial Survey	Percentile, Risk Analysis
Buskin Lake	Weir Count	Empirical Observation

[a] SRA = Spawner-recruit analysis.